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# IRON TRADE REVIEW

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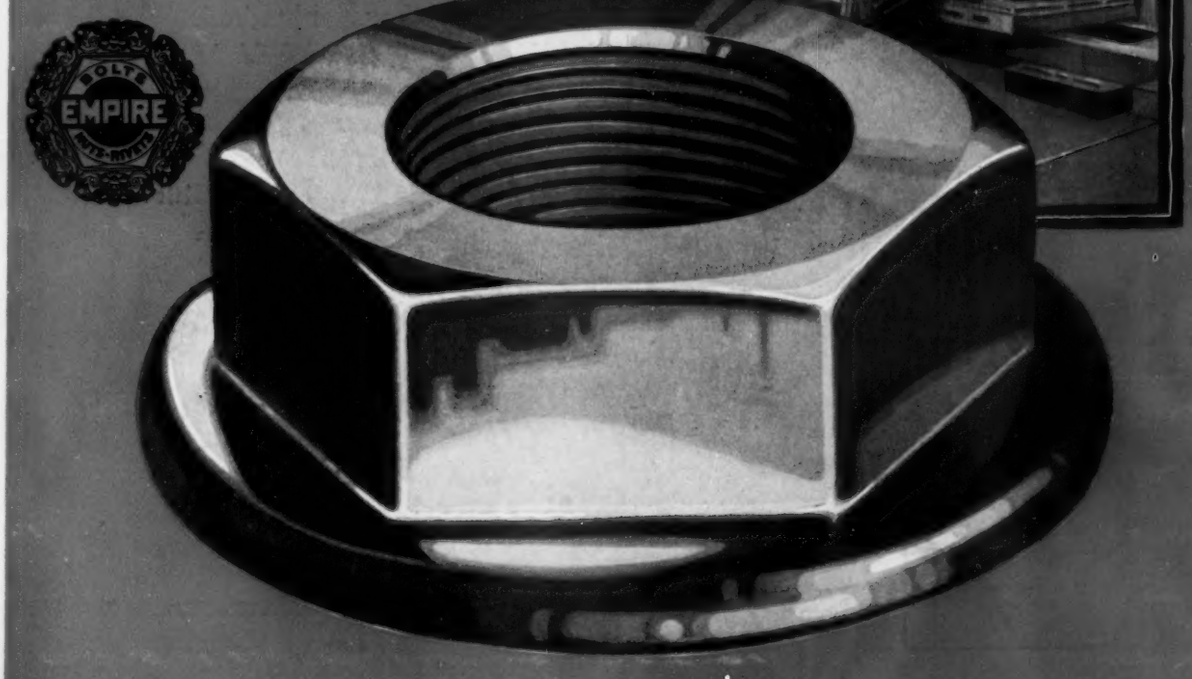

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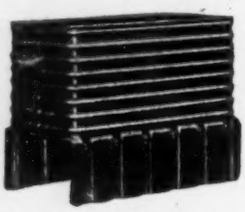

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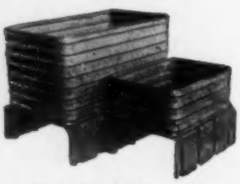

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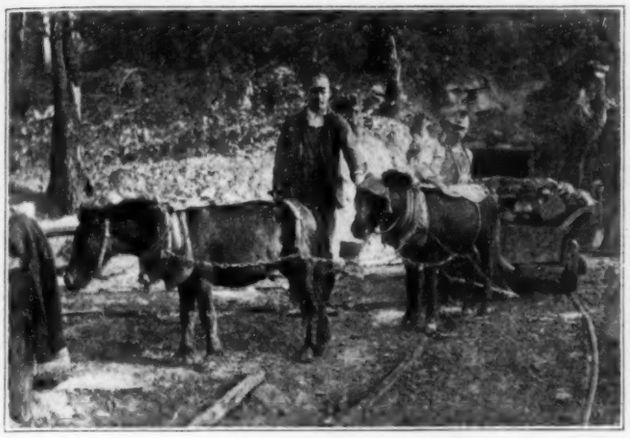
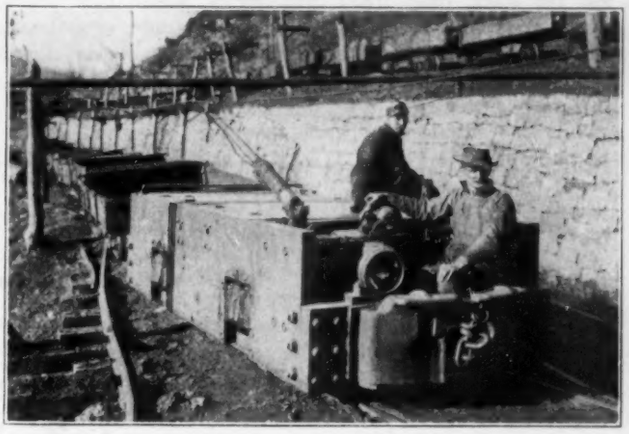
*Demand for coal for export arising from British strike stimulates production at small wagon mines as well as modernly-equipped properties.*





# British Coal Strike a Major Factor in American Business

By H. Cole Estep

WHEN a million British coal miners walked out on a strike May 1, few people expected any direct repercussion on American industry. But now, six months later, the strike is still in force and has become the greatest single factor affecting our own internal business and industrial situation. Not since the war has the economic interdependence or at least interrelationship of the modern world been more forcibly demonstrated than in the effect of the British strike on American economic affairs.

Why, it might properly be asked, should an industrial struggle in a foreign country across the ocean have any direct influence on our operations here? This is the third big British coal strike since the end of the war, but the two previous ones were much less important. The present strike is being felt in the United States because it has lasted twice as long as its predecessor and six times as long as the one in 1920.

The world lives from hand to mouth. Since the end of April, 110,000,000 tons of British coal production has been cut off from the world's supplies. As a result stocks have been reduced to the vanishing point everywhere in Europe and in all those great markets where British coal reigns supreme under normal conditions such as South America, South Africa and many points in the East. Consumers the world over are being forced to turn to new sources of supply. Great Britain herself has imported about 16,000,000 tons of coal since the strike began and is now taking it in from foreign countries at the rate of six or eight million tons a month.

There are only two countries with any appreciable coal surplus outside of Great Britain, namely Germany and the United States. Gradually, as the British strike continues, American mine capacity is being called on by the rest of the world to a greater and greater extent. Orders for coal are now pouring into this country from South America, Italy, Great Britain, South Africa, and in fact all over the civilized world. Both bituminous production and exports are rising rapidly. During the week of May 1, American mines produced 9,137,000 tons of soft coal. By Oct. 23 this had risen to 12,612,000 tons. Exports from Hampton roads and other Atlantic coast ports have jumped from a few thousand tons to around two million tons per week. Meanwhile our own industries have been active and industrial consumption advanced from 36,813,000 tons in May to 39,244,000 tons in September.

The net result is that the American coal industry suddenly finds itself confronted with demands approaching war-time proportions. This has brought about a complete reversal of the labor situation in the coal industry. For the time being the Jacksonville wage scale, even in nonunion districts, is being exceeded. Operators are scouring the country for miners. The hands of Lewis and his cohorts, leading the miners' union in this country, has been greatly strengthened. Coke is advancing. Pig iron is following

suit. Car shortages are appearing in various sections of the country.

All because British coal production has been tied up since May 1 and the world has turned to America for a portion of the hundred odd million tons of fuel it would otherwise have obtained from Great Britain.

But the situation appears now to be at about its most critical point, unless there are very unexpected developments in the British strike situation. It looks now as if the British strike might not be settled, but would simply collapse of its own weight in due course. Steadily, for the past two months, British miners have been going back to work. At first only a few returned. Then more. In September 100,000 men were at work. Today this nucleus has been increased to 240,000, or 24 per cent of the total number involved in the struggle. British coal production, therefore, is gradually coming back. In May and June it was practically nothing. By September the output from British mines had grown to about 600,000 tons a week. Today it amounts to around a million tons or more a week. While this is insufficient to supply even British domestic demands, the drift back to the mines in Great Britain is significant and it would not be surprising if British coal production were again on a normal basis in three or four months.

Whenever British production gets back to full capacity, the pressure on the American coal industry will be withdrawn. Previous experience has shown that we cannot expect to retain any large volume of coal exports in the face of British competition. England, with her ideal shipping conditions, coal going out and grain and food coming in, plus her control of markets, coaling stations and world-wide organization, will again dominate the international coal trade situation as soon as her production is restored.

Meanwhile, the strike is costing England $50,000,000 a week and this is bound to influence general economic conditions throughout the country.

STILL TAKING IT HUMOROUSLY

This cartoon from the *Birmingham Mail* illustrates the irrepressible good nature with which the British take even their most bitter industrial struggles. It shows A. J. Cook, secretary of the British Miners union demanding a fire in his bedroom at the hotel in Nottingham where he tried unsuccessfully to get several thousand men who had gone back to work out on strike again.

Ordinarily Great Britain produces about 5,000,000 tons of coal a week of which 1,000,000 or more tons is exported. British exports have been as much as 79,000,000 tons in a single year. The English domestic demand at present is about 4,000,000 tons a week. The deficiency is being supplied by imports of about 1,000,000 tons and an equal amount of production. Many British iron and steel plants and other heavy coal consuming industries are closed down or running part time with the result that the country is getting along on the present basis as best it can.

The average c.i.f. price of imported coal in Great Britain in August was 38 shillings ($9.22) per ton. Prices are still rising rapidly and for screened coal the current c.i.f. quotation is 60 to 65 shillings ($14.50 to $15.75). Atlantic freight rates have advanced from about 12 to 31 shillings ($2.90 to $7.50).

The effect of the strike on the British iron and steel industry has been catastrophic. Production of pig iron dropped from 539,100 in April to 13,600 tons in August. British iron and steel imports in the meantime rose from 261,787 tons in April to 445,704 tons in September. That portion of the American iron and steel industry which is interested in export trade undoubtedly will feel the stimulus of these conditions. In fact orders for coal, iron, steel, metals and other raw materials are coming just now to our producers in unprecedented volume from all over the world. This business, however, is transitory. Before long British coal production will be restored and the present huge demand on American facilities will diminish. But the reverberations of the British miners' strike will be heard in the halls of American industry for some time to come, inasmuch as an unexpected labor situation has been created and there may be difficulties during the inevitable period of deflation in the coal industry of this country.

## Soft Coal Output Gains

Bituminous coal production continues to outrun last year, being 12,612,000 net tons for the week ended Oct. 23 compared with 12,088,000 in the cor-

(*Concluded on Page* 1196)

# Better Merchandising Can Restore Lost Steel Markets

## *By Adopting Methods That Have Proved Effective In Other Industries, Producers and Fabricators Can Stimulate Declining Demand*

By E. St. Elmo Lewis

MAY last, Eugene G. Grace said to the American Iron and Steel institute: "I believe that we in the steel industry are called upon to conduct the merchandising side of our business better than we have. We must be better merchants."

I shall take that as my text, because it indicates that Mr. Grace sees in the merchandising side of the steel industry one prolific cause of the lack of profit on operations in the industry and of the relatively declining market.

He uses the word "merchandising"—he does not say "we must be better salesmen or advertisers" *but merchants.*

What is the difference between "selling" and "merchandising?"

Selling means the act of making the sale, and the methods that affect the personal relationship of the salesman to his product and his customer.

Merchandising is all of this, and more, for it relates to the whole process, from buying the raw material, making the article for sale, pricing it, selling it, delivering and collecting for it—every process being governed by a knowledge of the needs or wants of the buyer. The maker has constantly in view the obtaining of the greatest possible volume, with the greatest possible profit in money, at the same time good will and business-building results.

The steel fabricator as a merchant, therefore, starts with his raw product—with all his buyers, present and possible in mind—and merchandises the product with his market conditions, dictating his actions and decisions.

EUGENE G. GRACE,
President, Bethlehem Steel Corp.

*Whose apt observation, "We must be better merchants," uttered at the May meeting of the American Iron and Steel institute, is the text of the accompanying article, which is from an address at the annual convention of the American Institute of Steel Construction, White Sulphur Springs, W. Va., Oct. 27.*

Let us set down a few fundamentals:

A business is financed, a plant is built, and an organization is developed for the purpose of producing something that can be sold at a profit.

Therefore, the selling process is the ultimate purpose of an organization, and if it fails the company fails.

Its vital importance is obvious. It is the only reason why a business exists.

We sell to a public. That public is a peculiar thing. It is busy, indifferent, and exacting. We know less about it than we should, but we do know, however, that

**1. It is a fallacy that the public will automatically seek the best. It has to be educated and directed.**

**2. It is a fallacy that the public knows the difference between price and value.**

**3. It is a fallacy that the public will automatically reward enterprise and service.**

**4. It is a fallacy that the "public knows what it wants."**

**5. It is a fallacy that the public will demand over any great length of time what it is not reminded of.**

Therefore, we have salesmen and sales departments with their educational methods.

Selling is an absolutely essential function of all enterprises depending upon public support. It is

a human process because, no matter how much it may depend on price, it must also have those elements generalized under the cloudy phrase of personality, which can tip the scale in favor of our particular firm.

What does it matter what the price is if I do not know I need it? It matters still less if I do not want it.

That distinguished industrial statesman, Judge Gary, recently said before the American Iron and Steel institute: "People, on the average, are growing better; and they are becoming more intelligent and better educated. This makes for legitimate advancement, for prosperity and happiness."

What does?

People "becoming more intelligent and better educated."

That is exactly what the American Institute of Steel Construction is dedicated to do—to make people more intelligent about the buying of structural steel through the process of educating them in its proper use and value.

But education is not a self-starting process. It is not automatic. Somebody has to do the educating. There have to be educators.

That is exactly what trained salesmen are—educators. It is this very element of personality which the scientific man objects to. He forgets that "personality" with all its connotations is as important a part of the formula for making this necessary thing, a salesman, as is the alloy in his steel. Otherwise we would need nothing but phonographs, or nickel-in-the-slot machines.

The science of making salesmen has not gone so far as the science of making steel, but it is progressing. By the time the engineer has been able to automatically temper steels and tell us what electricity is, we may be able to submit complete formula for making efficient salesmen. So let us, with as much open-mindedness as possible, approach our sales problem, prepared to find a rather different sort of a man in charge—a man who in 1926 approaches markets with an inquiring mind, a slide-rule, graphic charts, and a ready smile—a friendly attitude, but a hard-boiled refusal to be swerved from his objective—to get all the trade that belongs to him through the enlightened self-interest of the customer.

What is the steel fabricator's problem? In his 1924 annual address, J. L. Kimbrough, president of the American Institute of Steel Construction answered it by saying, "Better selling methods. Of all the crying needs of this industry, I think none offers so much in the opportunity for accomplishment. By and large we are peddlers at so much per pound. We seldom get on the job until the plans are out; the benefits, advantages or merits of structural steel over other materials are seldom emphasized, and there is very little or no selling accomplished."

Steel fabricators are confronting a shrinking market. Sales costs are rising. You are uncomfortably conscious that you own the boat, but the current controls it. What shall be done?

There are four types of mind in business: Finance-minded men, who are trained in financial problems; production-minded men, who are trained in problems of production; the sales-minded man, who is trained in persuading people to see what he sees in any article he has for sale; and the administrative type, who knows the relation of finance, production, and sales to the problem of profit and good will.

Some industries are in the production era. They are managed by production men, or financiers. For many years demand was there, conscious and insistent. They did not have to sell as other industries understood it. But that era is past or passing.

Hasn't the dominant idea in the steel fabrication plants been one of production? How many men on steel company staffs are thinking, planning, and testing new and better ways of selling—new and better ways of marketing—new and better ways of applying your product to new uses—new and better ways of adopting your capacity to new requirements—researching to find new markets? In many industries it is the market studies that develop all new things of importance.

## *Are You Sure You Know Your Public? Read This:*

*HOW many times have you heard able business men say, "Merit sells goods," or "The public knows what it wants?" According to Mr. Lewis, these and other like phrases are not true.*

*He declares the following beliefs are fallacies:*

1. *That the public automatically will seek the best.*
2. *That the public knows the difference between price and value.*
3. *That the public will automatically reward enterprise and service.*
4. *That the public knows what it wants.*
5. *That the public will demand over any great length of time what it is not reminded of.*

## *Steelmaker Will Try Hand at Stimulating Demand for Steel*

*MR. LEWIS, author of the accompanying article, asked a steel executive what he thought of the well known "law of supply and demand."*

*The steelmaker thought a moment. "I think," he said, seriously, "we have accepted the idea that we are a basic industry that is controlled by a mysterious thing called the law of supply and demand. If the demand slows up, we cannot help it—and all we can do is to have supply large enough to care for demand when it comes around."*

*"But," he continued after a pause, "I think we are going to have something to say about demand, too. There are some of us studying other industries that haven't any more in their favor than steel, and they have apparently controlled their demand much better."*

It happens that the author was in two specialty lines: the cash register and the adding machine. Manufacturers of these products for years have been spending over a quarter of a million dollars annually in developing new machines to meet developing tendencies in their markets. They have machines even now that will not be marketed for five to ten years.

What has steel done for the motor industry? What has it done for the building industry? For the railroads?

You may say, "These things are part of the sales job. When the demand arises we'll meet it." Granted, but doesn't the whole organization from president, board, officers, down to the office boy exist for just one thing—to fill demand? to make demand? to create more demand in order to have more to produce?

At least that is the 1926 sales manager's way of looking at it.

The attitude of mind, which is made by the scope of the training and congenital limitations or capacities of a man, is important. What a man thinks, he is.—What the public thinks, it does.

It seems to be becoming recognized that it is time for the steel industry to become sales minded—to put the accent on merchandising instead of production.

The automobile business has been built on an attitude of mind. It has been the attitude of mind of the American man and woman toward the motor car that has made it difficult for the old style economists to foretell the saturation point, which for nine years has eluded the statistician. The American man was willing to forego clothes, shoes, jewelry and many other things for an automobile.

The state of mind of the American family settled the sales problem and unsettled the statistician.

The forces of advertising and selling helped to create that state of mind. The road builder made sales to an auto-minded public. The roads were built and the auto sales continued to leap. The statistician began all over again. Thus, it is important for any industrial manager to realize the power of those psychological factors (that lie outside the money volume), and to keep in touch with the tendencies of ebb and flow of public acceptance of any product.

If the steel industry had to depend on the market that was compelled, i e., had no choice, to buy steel, it would have much less of a market and demand than it has today. It has been the market developers for autos, steel furniture, and a thousand other things, that did it.

There is a large present market, and a larger possible market, that depends on the freedom of choice which dominates all markets. This freedom of choice is conditioned and measurably controlled by the state of mind of the buyer, and this state of mind is governed by the degree of education, information of the buyer and the service ability of the seller.

The commercial, industrial, and economic history of the past fifty years clearly shows that this freedom of choice can be guided into certain channels, the method is daily being refined and greater efficiency certainly obtained. We who specialize in marketing and merchandising have developed a technique. It is known that certain fundamentals must first be established. These fundamentals come of the analysis of markets—the determination of values—then, given a clean-cut opportunity, the result is as certain as any other effort of man dealing with man.

Advertising will not save a bad article from merited oblivion. It will uot save a poorly managed business. It will not take the place of efficiently organized selling methods and trained salesmanship. It creates that attitude of mind on the part of the buyer which makes him receptive to good merchandising of an intrinsically valuable service or commodity. It shortens the selling process. As such, when properly done, it is an economic method of aiding the distribution process, and speeds up consumption, thus increasing volume. The world is full of proof that this is so. There is not a branded article you wear, eat, use, that does not bear witness to the truth of that statement.

After all, the problem of educating one's market is the problem of the seller. It is not the customer's fault if he doesn't buy. In short, we must achieve this sales attitude of mind toward the problem of sales before we hope to get greater results from merchandising.

That sales attitude of mind looks out and in. It understands the problems of the buyer, studies his needs, knows his wants (frequently two different things), caters to the buyer's attitude but guides and informs it. It is politic and persuasive, because it knows that cold reason does not move the world—even in staid engineering. But back of this sales attitude is a mechanism and a system at work distilling out of all the human contracts a net result satisfactory alike to financial and production departments.

A sales manager trained in the 1926 way of developing volumes and markets for the steel fabrication industry would approach the subject by analysis.

Assume you were to ask such a merchandise manager, "How would you tackle the problem of applying up-to-date methods to our business?"

Undoubtedly he would reply with the questions in the accompanying list There is not a single great sell-

## *These Questions Help Check-up of Steel Sales Organization*

*IF YOU called in a real sales expert to help you reorganize your sales department, he probably would ask these questions:*

*What kind of a sales department have you?*

*Does it make its sales plans after a study of every territory and line of business?*

*Does it use sales quotas based on what you can produce—or, an increase over last year's volume—or, on what you think a fair share of the total business in each territory is—or on all these factors? Does it have a quota at all?*

*If it doesn't, how do you know when your sales department has done its job?*

*Does it study how your goods are successfully sold—why sales are lost—what competitor succeeds and why?*

*Does it develop incentives and rewards for the salesmen so as to encourage men to develop their greatest efficiency, i. e., obtain the highest ratio of results to opportunity?*

*Do you really train your salesmen in the technique of application of your product to the widest variety of conditions, lines and uses?*

*Do you develop the technique of the ability to meet and gain the confidence of the buyer?*

ing success that does not follow well defined and systematized sales training. Who is going to use your sales manual? See that your salesmen know what is in it? How to use it?

This training means:

1. A study of the application of the product to all possible uses under all conditions.

2. Meeting objections to product, service, etc.

3. Meeting competition. Fully 40 per cent of the training time lies there. There is a best way. Make all salesman use it.

4. Have you a sales manual?

5. Do you put your new salesmen through an organized course of training before turning them loose?

6. As a matter of fact, do you depend on personality and dickering rather than training and superior knowledge? Personality and capacity to meet competitive prices are weapons of great value, often determining, but then the buyer buys, he is not sold.

7. How many of your salesmen know more steel construction (the application of your product to diverse conditions) than your average buyer?

8. Have you ever sold your own men on the advantages of steel over concrete for bridges, for instance? Did you ever listen?

9. Who does your training?

10. Is he successful?

11. How do you know?

12. How do your salesman approach a sale?

Do they go at it as if the value they had was going to make the sale—or, do they expect pull, price, and special favors to do it?

As indicated in the accompanying table, every sale involves five steps, which may be consummated in an hour or a year, depending on circumstances. The education, training, experience of the salesmen determines whether they are taken effectively or wastefully.

Obviously, the industry should be advertising its product. The cement people are rather proud of the way in which, in some lines, they have taken the market away from the steel fabricators. The author was in the reinforced concrete field in 1904 and helped to get out the first handbook for engineers, architects, and contractors. That book was in big demand. The construction world needed education. We made our contribution. It was greatly appreciated—in orders.

The American Institute of Steel Construction is making a fine beginning toward remedying some of the fundamental data needs for the equipment of sales organizations; but it will need propaganda and organized education of the market and possible markets to efficiently overcome resistance. Using salesmen as advertising is too costly. It is hidden in the expense account.

That calls for the advertising of the industry in which every one from mine to fabricator is vitally interested and should participate. The uniformly satisfactory record of co-operative advertising for industries, where intelligently done, is too well known for it to be necessary for me to mention it here at length.

In every sale, steel should be sold as against outside competition and price should be the last thing considered.

A market consists of past and present markets and future markets. The past and present market offers an opportunity to study tendencies and realizations against opportunities. This study should be made for the purpose of comparing your records against those of your competitors.

This suggests further questions:

What are the merchandising requirements of your market, i. e., how do buyers want to be served?

What are the factors influencing demand; consumer attitudes; business conditions; architectural tendencies; contractor tie-ups; competitive products; and competitive organizations? What is the condition with respect to each? What is the comparison of volume with that of competitors?

Research also must look into future or potential markets. Here is where the steel industry is weak. Some industries are notably strong. The cement people have done notable work here. Steelmakers and fabricators chafe under its wide claims and unconditional assumptions, and say some of it is not true. Well, why keep these facts a dark secret?

Are you preparing for the market of ten years hence? Adding machines, automobiles, cash registers, tractors, flying machines are.

Are you studying tendencies of markets? You could have foreseen the cement competition 20 years ago. You could have felt the rising tide of public interest.

Markets are in men's minds long before they express themselves in orders. The most important thing is to have an objective for your research. What do we want today? Where are we going tomorrow?

In conclusion, as merchandisers, steelmakers and fabricators should:

1. Intensify the gathering and classifying of data on the real value of steel in the life of the people.

2. Get all the facts about present sales performance, and its net value. Take all sales experiences of the industry and outside to find the ways it can be improved and applied to your own work.

3. Have constantly in mind the facts and figures which will permit you to control sales effort.

4. Investigate future markets and take steps to guide them in the industry's interest.

5. Change the basis of price so you can be paid for the service which is necessary to insure satisfied customers.

6. Train salesmen so that they will know more about your product in relation to its uses than any buyer.

7. Make a part of the sales policy the utilization of all proven devices by which the maximum possible demand shall be maintained at all market levels.

8. Tell the world what you are doing and what you have, in a way to make it realize its value and want your help.

## *Every Sale Involves Five Distinct Steps*

*ACCORDING to the author of the accompanying article there are five distinct steps in each sales transaction. They are as follows:*

*1.—INVESTIGATION; during which you find out all about the proposals, what they are for; what the specifications are (and here you should be "in" on time to advise and suggest); what inside and outside competition there is likely to be; what the personal problems are, architect, engineer, contractor, owners or commissioners, and the attitude of the public in some cases.*

*2.—FORMULATION; when you put your proposition into shape, submit proof of your ability to help the buyer to buy what is for his best interests; prove your claims; prepare your campaign of education.*

*3.—APPROACH. Now you approach your prospect. You prepare for this as you please, to get a favorable time and place for your next step.*

*4.—DEMONSTRATION. You now demonstrate that your product is the best for the purpose—that your service leaves nothing to be desired, and that your price is right; and you do this to all concerned.*

*5.—CLOSE; you come to the clinching final step of getting in or out. Here is where the showdown comes. Salesmanship sometimes is the sole determining factor, but with four other steps carefully prepared and developed salesmanship has its greatest opportunity.*

# Will Make Wide Flange Beams

## Judge Gary Says Reconstruction of Homestead Mills for this Purpose Will Be Completed by January—Bethlehem President Issues Statement on Patent Rights—Trade Watching Developments

WE ARE building a mill which will be prepared to manufacture a wide flange beam," says Elbert H. Gary, chairman of the United States Steel Corp.

"Bethlehem has an exclusive license under numerous patents which have several years to run and which cover the process for rolling the so-called broad flanged sections, and also cover the broad flanged sections as a product," says Eugene G. Grace, president, Bethlehem Steel Corp.

The fact that the Steel corporation for more than a year has been carrying out plans for the rolling of wide flanged beams at Homestead has been known to the trade for a long time and has been the subject of numerous reports which have appeared in IRON TRADE REVIEW. It was not until the matter became the subject of distorted reports in various newspapers during the past week that official statements were made with reference to the construction work at Homestead. The newspaper reports stated that Bethlehem Steel Corp.'s patents on the so-called grey, or Bethlehem, sections are expiring.

When Judge Gary was questioned about what is being done at Homestead, he issued the following statement, Oct. 26:

"Referring to the article published in the newspapers concerning the construction of a structural mill at Pittsburgh, it is a fact that we are rebuilding the Homestead structural plant, which has become more or less out-of-date, and among other things are building a mill which will be prepared to manufacture a wide flange beam. The expectation is that the mills will be completed in January."

At the same time Mr. Grace was asked for a statement setting forth the position of Bethlehem Steel Corp. On Oct. 27, he replied with the following statement:

"E. G. Grace, president of Bethlehem Steel Corp., when asked regarding rumor that the United States Steel Corp. plans to roll the so-called grey beam at Homestead, stated that although he had been informed that the structural steel mills at Homestead were being rebuilt, he did not know what sections were to be rolled there, but he would not expect the United States Steel Corp. to infringe any of Bethlehem's patents.

"The statement that recently appeared in the press to the effect that Bethlehem's patents had expired or were about to expire, is entirely unwarranted. Bethlehem has an exclusive license under numerous patents which have several years to run and which cover the process for rolling the so-called broad flange sections, and also cover the broad flange sections as a product. These patents were originally issued to Henry Grey, and the sections are sometimes called grey sections. They are usually known

(*Concluded on Page* 1207)

# Traces Development of Grey Mill

*By George W. Burrell*

Formerly Vice President, Wellman-Seaver-Morgan Co., Cleveland.

*HENRY GREY, who formerly was general superintendent of the Cleveland Rolling Mill Co., Newburgh, O., now the Newburgh plant of the American Steel & Wire Co., went to Duluth, where for some time the Ironton Structural Steel Co., backed by New York financial interests, had been attempting to roll a wide flange I-beam, or what now commonly is termed the Bethlehem type I-beam. Considerable money had been spent by the New York interests in their attempt which had met with failure.*

*At the time Mr. Grey left, I was in charge of the testing department of the Cleveland Rolling Mill Co. I went along with Mr. Grey as master mechanic and engineer. We went to the Ironton works in* 1896.

*We found that the Ironton people had been attempting to roll the beams directly from an ingot. It was impossible to reheat the ingot thoroughly and evenly before rolling and consequently the works had been unable to turn out beams with flanges of equal width. After considerable experimenting, we devised the method of putting the ingot through a blooming mill, breaking it down to about 2¼ inches thick at the web. This was then reheated and put through a finishing mill, producing the I-beam with equal width flanges. Of course, further refinements and improvements were necessary, but the fundamental change made was breaking down the ingot on the blooming mill.*

*This took place by the end of* 1897. *The New York interests, as soon as they found the method was successful, closed the Ironton mill. Mr. Grey went on to New York and I came back to Cleveland and joined the Wellman company. Mr. Grey found that a German company was interested in the new method of rolling shapes and he was retained by it to construct a mill in Luxemburg. Mr. Grey went to Luxemburg, constructed and installed the new mill, which went into actual operation in* 1902.

*The mill was an immediate success in Germany and the United States Steel Corp. started an investigation of the process. As soon as Charles M. Schwab heard of the new mill he got in touch with Grey. Schwab and Grey went to Germany and before they returned Grey had agreed to come back to New York and design a mill for the Bethlehem Steel Co. and then relinquish his interests. Grey solicited my assistance for building the Bethlehem mill, but I was tied up with the Wellman company then and did not go. After the new mill was constructed it was changed to the Bethlehem-type mill, the name Grey being dropped. Mr. Grey owned the patents on the mill and disposed of them to the Bethlehem Steel Co. The mill was put in operation in* 1908. *Mr. Grey, the inventor, was born in London in* 1849 *and came to the United States in* 1870. *He died in East Orange, N. J. in May,* 1913.

# Large Uses of Steel In Small Ways

SALE of many nationally distributed products of manufacture has been augmented greatly by the availability of supplies and auxiliary parts in convenient size, form and quantity. A prominent instance of this market enlargement is found in the mechanical pencil industry, where the production of extra leads in small metal or wood boxes has done much to popularize the pencils themselves by making it easier for the user to replenish his supply at a moderate cost.

In the Oct. 30, 1924, issue of IRON TRADE REVIEW an article described the process of manufacturing mechanical pencils, and the production of extra-lead containers is almost as important as the main product. In terms of single containers, the weight of steel consumed is negligible; but it is not generally known that fully 65 tons of cold rolled strip steel is used annually in their manufacture.

The strip steel usually employed is 0.013-inch in thickness and is received in reels of convenient size. These are placed directly on reeling apparatus and fed into punch presses fitted with blanking and forming dies. The first die usually stamps the trademark of the maker, the second performs punching operations and trims the sides. When the steel leaves the punch press the box is completely formed and needs only to be compressed a bit more into final shape.

The closing operation is performed on separate punch presses, with a capacity of some 20,000 boxes per day. The original stamping, blanking and forming presses have a daily capacity of 25,000 to 30,000 boxes.

The small caps for the boxes also are made of cold rolled strip steel and go through similar operations on presses with high production capacities of from 35 to 40 thousand caps per day per machine.

Before the boxes have been completed they are nickel plated and finally ball burnished to give a high finish. The burnishing takes place in large, revolving tanks filled with steel balls and a soap solution or similar lubricant, and when dried are ready for filling.

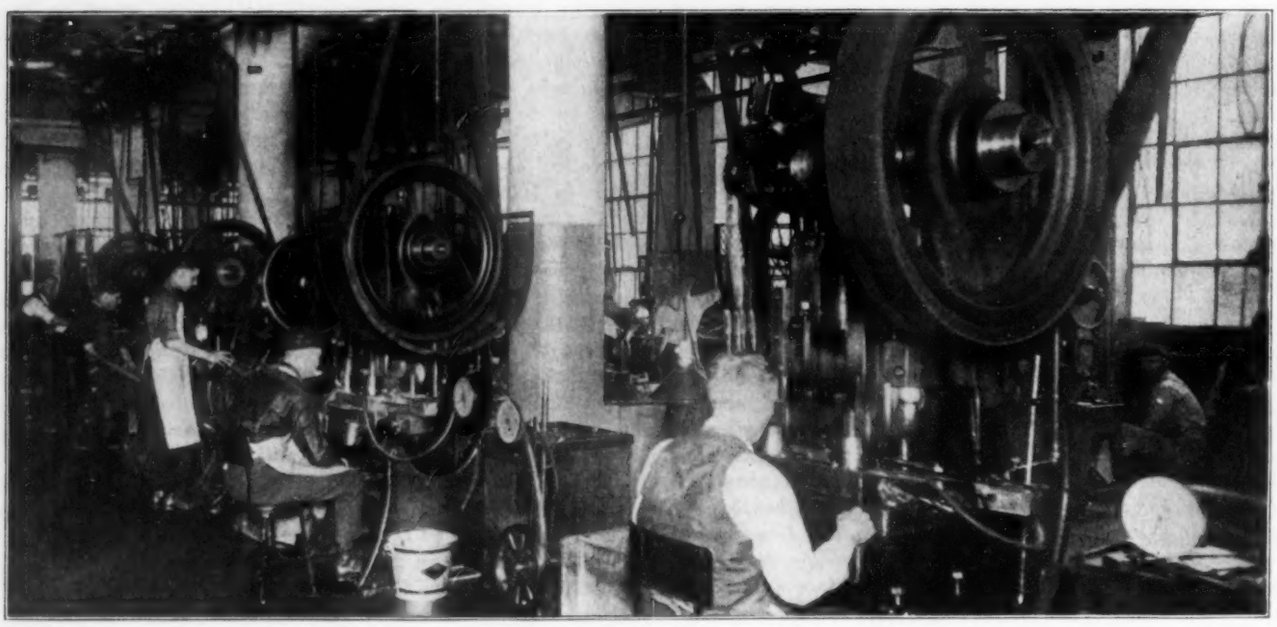
As a rule the lead filling is accomplished by special machines adapted to individual needs. Some of these machines to load up to 10,000 boxes of leads per day, from one to two dozen pieces of lead to the box.

## Pencil Lead Boxes

*THIS is the seventy-sixth of a series of articles dealing with some of the obscure uses of steel which go far toward absorbing the great American tonnage.*

*The first article on "corsets" appeared Nov. 22, 1923. Other articles appearing fortnightly since are:*

| | |
|---|---|
| *Pins* | *Pens* |
| *Cotton Ties* | *Steel Wool* |
| *Toys* | *License Plates* |
| *Spinning Rings* | *Hypodermic Needles* |
| *Card Clothing* | *Shoe Steel* |
| *Tie Plates* | *Crushed Steel* |
| *Tacks* | *Skates* |
| *Knives and Forks* | *Needles* |
| *Surgical Instruments* | *Phonograph Needles* |
| *Fence Posts* | *Golf Clubs* |
| *Eyeglass Cases* | *Mechanical Pencils* |
| *Fishing Tackle* | *Burial Caskets* |
| *Dental Drills* | *Telephones* |
| *Pocket Knives* | *Radio Towers* |
| *Rat Guards* | *Brushes* |
| *Snap Fasteners* | *Electric Bells* |
| *Paper Clips* | *Bookbinder Wire* |
| *Steel Vests* | *Sucker Rods* |
| *Electrical Conduit* | *Watch Hands* |
| *Radiator Furniture* | *Steel Furniture* |
| *Notebooks* | *Highway Markers* |
| *Metal Beds* | *Camp Cots* |
| *Bolts and Nuts* | *Flexible Shaft* |
| *Metal Lath* | *Wood Pipe* |
| *Tin Cans* | *Buttons* |
| *Umbrellas* | *Sheet Metal Screws* |
| *Steel Barrels* | *Rivets* |
| *Washers* | *Billboards* |
| *Overall Trimmings* | *Razor Blades* |
| *Bird Cages* | *Metal Strapping* |
| *Turnbuckles* | *Lace Tips* |
| *Steel Derricks* | *Oil Cups* |
| *Handle Cores* | *Ventilators* |
| *Camp Stoves* | *Toy Autos* |
| *Bottle Caps* | *Safes* |
| *Artificial Limbs* | *Scissors—Shears* |
| *Finger Nail Files* | *Pistols* |



PUNCH PRESSES ARE USED FOR STAMPING, BLANKING AND FORMING METAL BOXES FOR EXTRA LEADS

# Electrifies Rolling Mill Drives

## *Change-Over Program at Indiana Harbor, Ind. Is Accomplished in Minimum Time Despite Obstacles Encountered*

THREE steam-driven mills recently were converted to electric driven at the Indiana Harbor plant of the Inland Steel Co. The 36-inch blooming mill, a 2-high reversing mill, previously was driven by a twin simple engine with cylinders 50 x 60 inches. The motor now in use was built by Westinghouse Electric & Mfg. Co. and is rated at 7000-horsepower continuously, with a maximum torque of 2,000,000-foot pounds. The 24-inch bar mill, a 2-high, 4-stand, reversing mill perviously was driven by a twin simple engine with 36 x 48-inch cylinders. It has been replaced by a General Electric reversing motor rated at 3000-horsepower continuously, with a maximum torque of 500,000-foot pounds. The 24-inch billet and sheet bar mill, 3-stand, 3-high mill, previously was driven by a 38 x 60 x 72-inch tandem compound engine. This has been replaced by a 3000-horsepower induction motor, driving the mill through a reduction gear.

The mills were shut down at 8:00 a. m. Sunday, Sept. 5, and all changed simultaneously.

The time required for removing the blooming mill engine was 12 hours. No effort was made to save any part of the engine, and it was removed in as large pieces as the crane could handle. The maximum lift was the crankshaft which weighed 65 tons complete. The total weight of the engine was about 400 tons. To provide foundations for the motor it was necessary to excavate 225 cubic yards of concrete. This work, however, could not be done before the engine was removed. The removal of this concrete and such other excavation as was necessary for the new foundations required 46 hours.

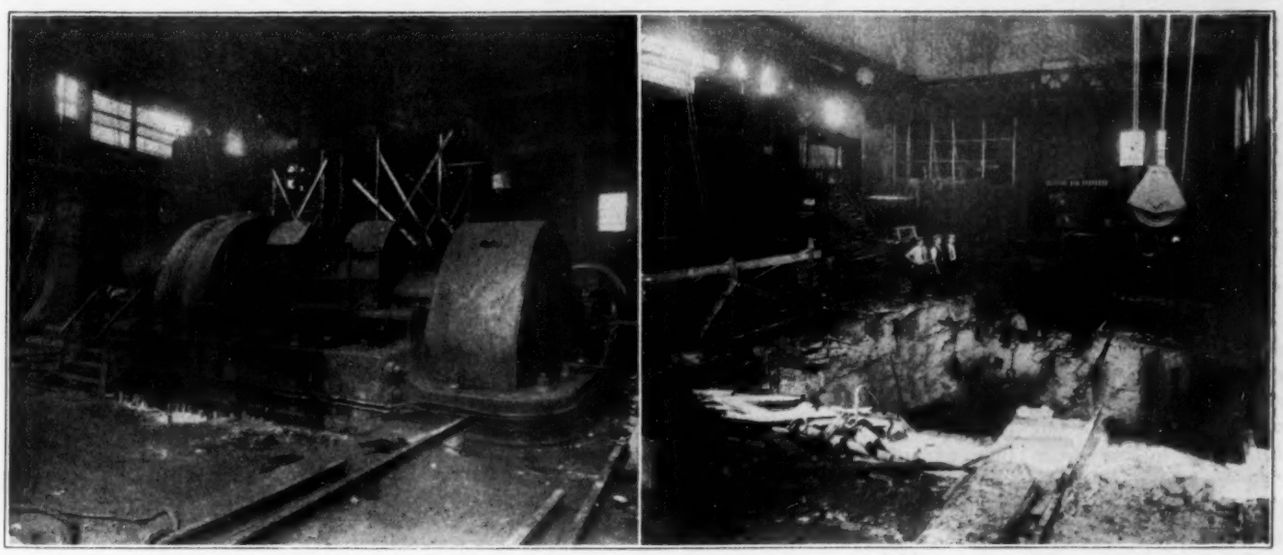
### Set-up Involves Care

As far as possible, the concrete forms and templates for the foundation bolts had been made up before work started. It was necessary to exercise the greatest care in setting the foundation bolts for the motor, as there were thirty-two 3½-inch bolts; eight of these at the mill end extended through the bearing, pedestal, and cap. It was necessary, therefore, that they be set exactly and be kept plumb. The long bolts extending through the bearing were approximately 8 feet above the top of the concrete and they were held at the top by a second template accurately lined up with the main template supporting them. The time required to set the concrete forms and foundation bolts was 11 hours.

Concrete in the motor foundation totaled about 120 cubic yards, and this was poured from a 1-yard car mixer in four hours. It was allowed to set 11 hours before the assembly for the bed plate was commenced. The motor bedplate was bolted together before being set on the foundation and handled as one piece by the crane. This bedplate is approximately 20 feet square and weighs about 37 tons. It was slipped over the foundation bolts, although the clearance between the bolts and the holes was only ⅛-inch. It was completely lined up ready for grouting in 9 hours. The bedplate was grouted immediately after being lined up on the foundation, the total time for grouting and setting of the grout requiring 9 hours.

The lower half of the motor field, the lower half of the brush rigging and the lower half of the end bell then were assembled on the bedplate, the time required being 4 hours. The armature with shaft weighed between 85 and 90 tons and could not be handled by one crane. A spreader bar was built so that two cranes could be used, but this reduced the available lift to such an extent that it was an awkward job. It was necessary to adjust the slings so that the shaft would be horizontal when lifted. Due to the time required for adjusting slings and handling it took 6 hours to move the armature from outside the building and set it in the bearings.

Immediately thereafter the upper half of the frame was erected. This took an hour. To complete the assembly of the brush gear, motor connections, fit in the brushes, and set the brushes on neutral required



(LEFT), TWIN SIMPLE STEAM ENGINE WITH CYLINDERS 50 X 60 INCHES FORMERLY EMPLOYED FOR DRIVING THE BLOOMING MILL. (RIGHT), EXCAVATION NEARLY COMPLETED. OVER 225 CUBIC YARDS OF CONCRETE WAS REMOVED

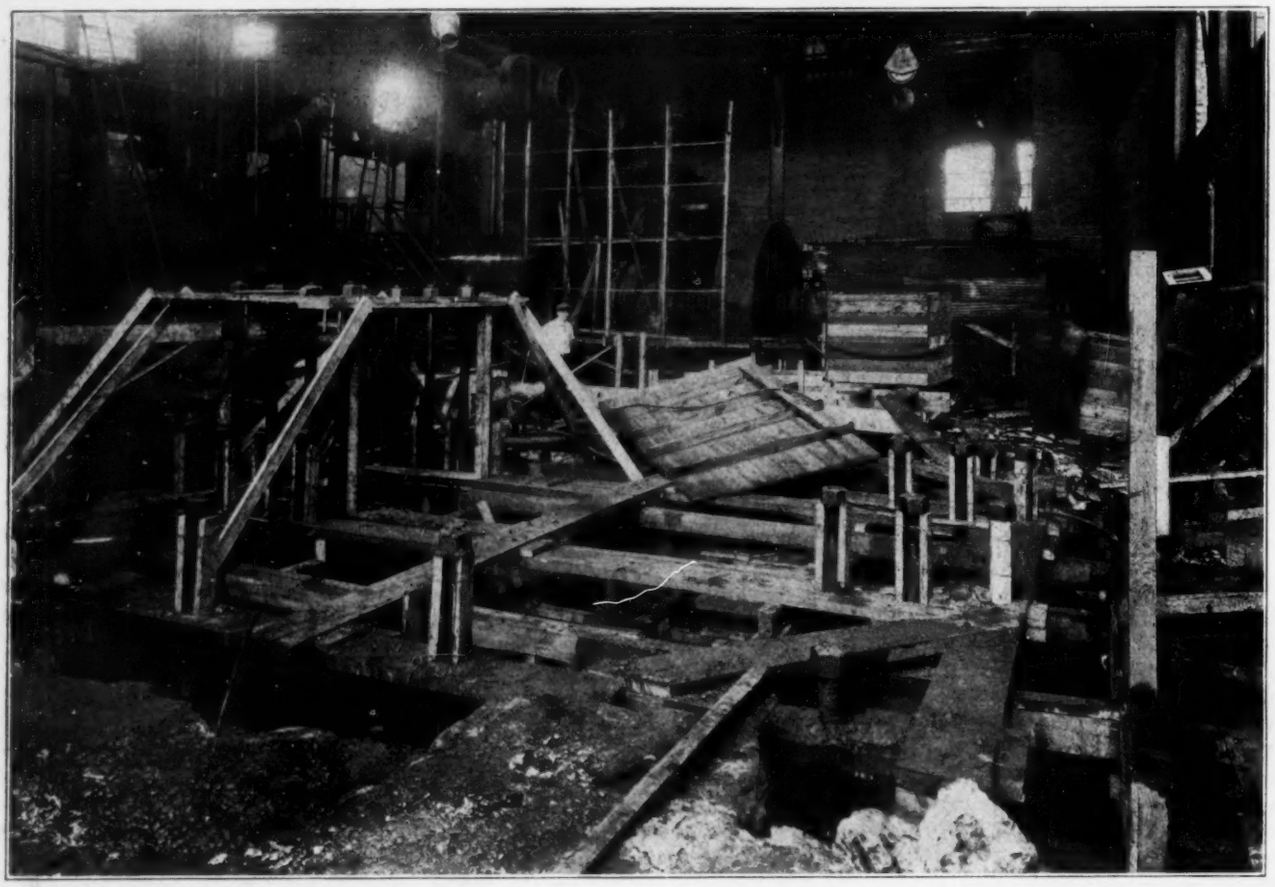
30 hours. The motor was started at 7 a. m. Saturday, Sept. 11, and 4¼ hours were taken in testing the control equipment, making adjustments, and correcting errors in connections. The first ingot was rolled at 11:15 a. m., Sept. 11, and the mill then continued in regular operation. The total time involved on this job was 6 days and 3¼ hours from the time steel was rolled with the engine until the time it was rolled with the motor. The flywheel motor-generator set and control equipment previously had been erected, and the main armature, and field connections had been run as far as possible before shutting down the engine and discontinuing rolling operations.

During the time the motor was being erected, the large air ducts for ventilating the motor-generator set and the reversing motor were excavated and concreted and the fans supplying air were erected so that when the reversing motor started the fans for cooling were in operation. The progress of this job is illustrated by the accompanying photographs.

The 24-inch bar mill engine, which weighed approximately 200 tons, was removed in 8 hours. The old foundation, which had to be removed to make room for the motor foundation, was of brick in cement; 109 cubic yards of this foundation were removed in 23 hours. Concrete forms and foundation bolts were set in 5 hours. The new concrete poured, which amounted to about 90 cubic yards, was poured in 3 hours, and was allowed to set for 9 hours.

The time required for assembling and setting the bedplate was 10 hours, and 12 hours were required for grouting and setting of the grout. The lower half of the frame then was assembled on the bedplate in 3 hours, and the armature set in the bearings, which required 1 hour. The armature was handled by the crane in the building. The assembly of the other half of the frame required 3 hours.

To assemble the brush rigging, complete motor connections, adjust the brushes, and set on neutral required a total of 33 hours. The motor was turned over at 10 p. m. Thursday, Sept. 9. There remained the adjusting of the control, but as the mill, which was being overhauled extensively was not ready, no further work was done until the next morning. By 10 a. m., Sept. 10, all adjustments were made and the motor running. Total time required for the completion of this job was 122 hours, which could have been reduced 10 hours if the mill had been ready to operate. Due to delay in completion of the mill, the first steel was not rolled until 5 p. m., Sept. 10. No work was done on the motor, however, after 10 o'clock Friday morning, Sept. 10.



FOUNDATIONS FOR THE MOTOR WERE COMPLETED THREE DAYS FROM THE TIME THE WORK OF REMOVING THE STEAM ENGINE WAS STARTED

The flywheel motor-generator set and control equipment had been erected prior to the shutdown, and the leads run as far as practicable while the engine was in operation. No room was available in the motor room for the storage of parts before the engine was removed and all material had to be skidded into the motor room from an adjoining mill, as there is no track into this location.

The work involved in electrifying the 24-inch sheet bar mill was not so extensive as in the case of the two previous mills as it was only necessary to remove the engine and couple up the motor and gear, which had previously been installed. This was done in ample time to allow the sheet bar mill to start at the same

time as the blooming mill, on which it is dependent for steel. No particular effort was made to hurry this job, and the work was performed at such times as men were available from the crews employed on the other two mills.

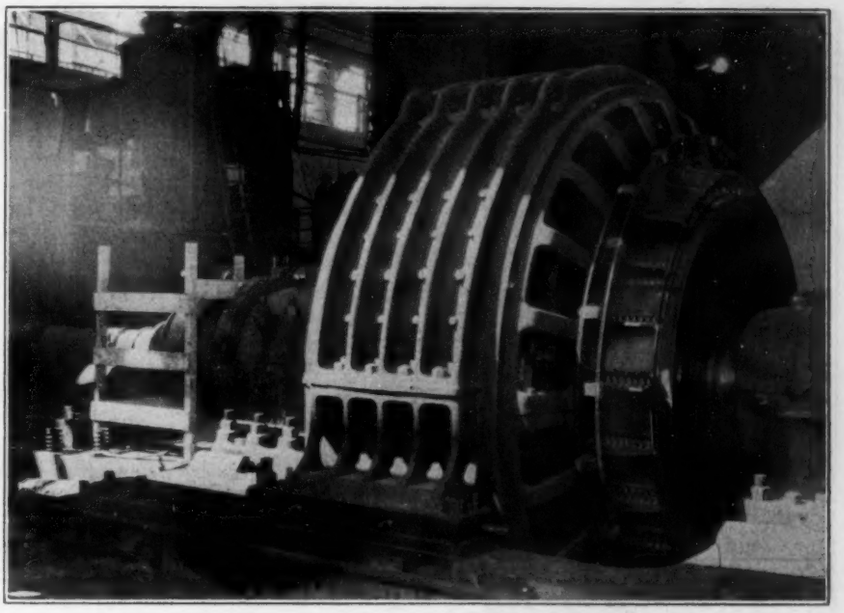
An analysis of the labor required for the whole job of removing the engines and assembling the motors, follows:

| Labor | Man hours |
|---|---|
| Riggers | 2,213 |
| Boilermakers | 1,056 |
| Machinists | 2,654 |
| Carpenters | 2,679 |
| Pipe fitters | 1,445 |
| Masons | 36 |
| Electricians | 2,492 |
| Common labor | 10,836 |
| Cranemen and locomotive crews | 1,926 |
| Total | 25,337 |

A factor, which materially aided in shortening the time required, was the use of quick-setting cement throughout, as this enabled machines to be set on foundations in much less time than would have been possible with ordinary concrete.

All the work was done by the regular force of Inland Steel Co. with the exception of the dynamiting of the old foundations, which was handled by the Chicago Concrete Breaking Co.

Before the mills were placed in operation they were in practically a finished condition. Concrete floors had been put in and, except for minor jobs, everything was complete.



BLOOMING MILL MOTOR, WHICH WAS PLACED IN OPERATION SIX DAYS AFTER THE REPLACEMENT WORK WAS STARTED

## To Hear Aluminum Case

Federal trade commission has announced it will resume the hearing in its case against the Aluminum Co. of America in Pittsburgh, Nov. 8.

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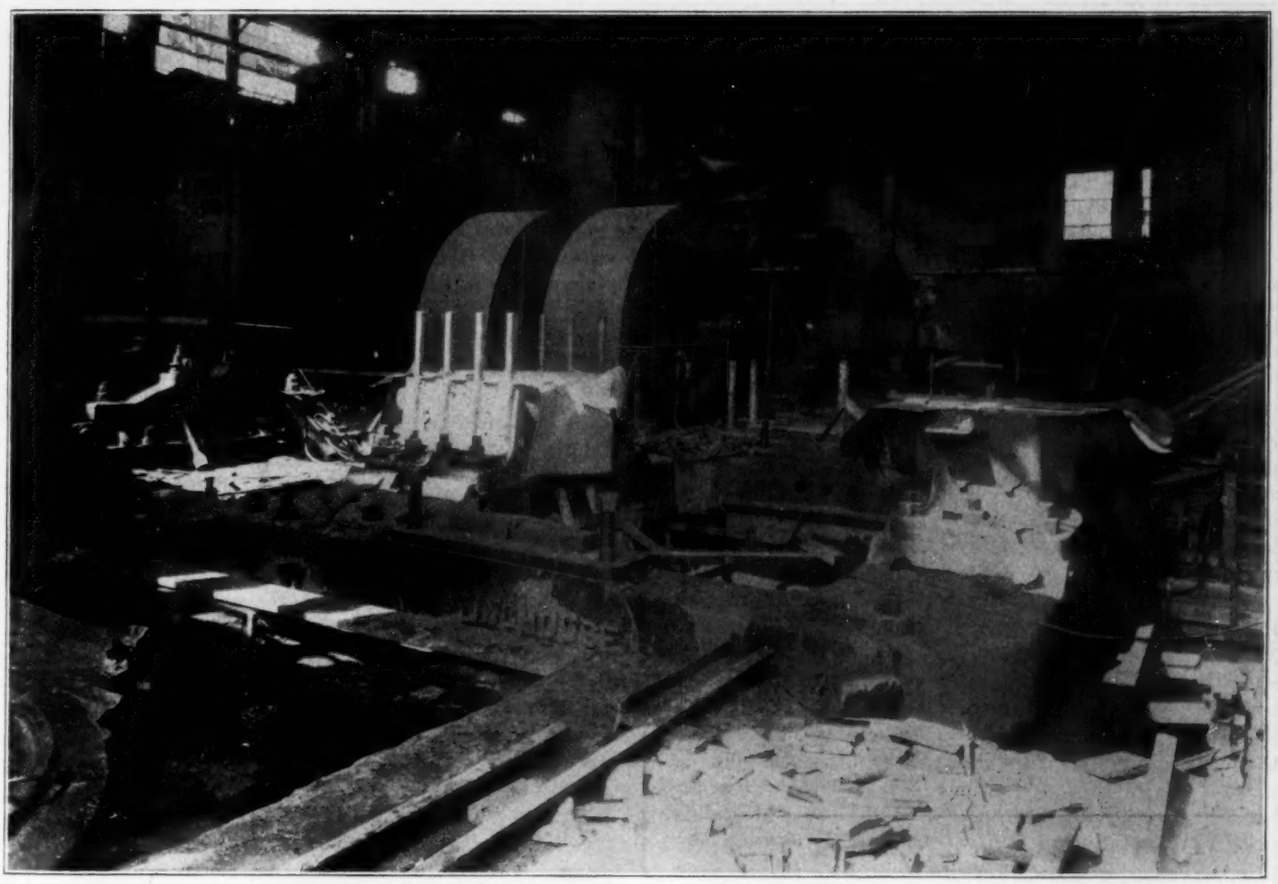
Until 1880 the knowledge of manganese and silicon as alloys was limited although in 1876 Gautier made observations on the hardening properties of manganese.

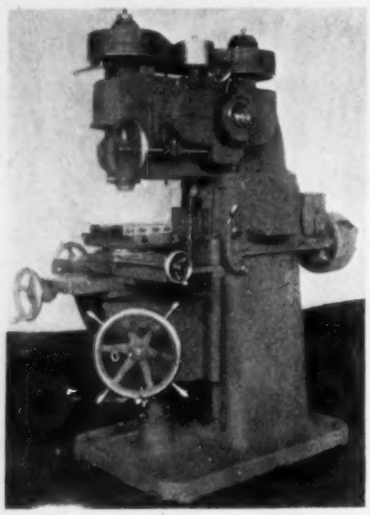


THE MOTOR BEDPLATE, HANDLED IN ONE PIECE WAS LINED UP COMPLETELY FOR GROUTING IN 9 HOURS. IT WEIGHS 37 TONS

## Die Sinker Can Do Cherrying Work

No. 176

Pratt & Whitney Co., New York, has placed on the market a new universal die sinker, particularly designed to do cherrying and straight die sinking operations without any change of set-up and without adding any special attachments. The column of the new machine is made in two pieces and the knee is counterweighted to allow easy adjustment. A special feature is the oscillating head by which cherrying may be done with an ordinary die sinking cutter. An indicating dial on the head shows the exact position of the cutter in the work during a cherrying operation.

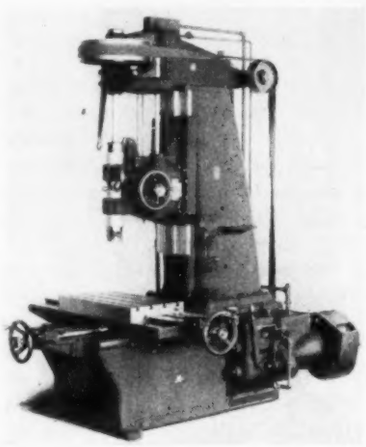


The new spindle is hardened and ground at the lower end and is fitted with lapped thrust washers; lower bearing is conical while the upper is cylindrical. Machine is provided with six spindle speeds ranging from 70 to 900 revolutions per minute. Distance from table surface to spindle end is 23 inches.

## Jig Borer Has New Improvements

No. 178

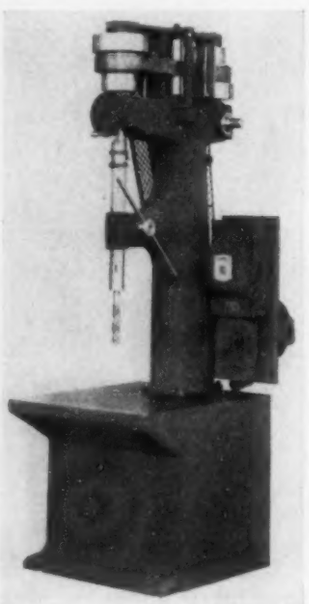
Pratt & Whitney Co., New York, has redesigned its vertical jig boring machine, adding several improvements to facilitate operation. Spindle pulley has been widened and the idler pulleys have been made adjustable. Motor drive has been rearranged to make the machine more compact. Motor is hung on a swinging platform and a belt tension adjustment has been added. Main drive operates through a large friction clutch pulley which is enclosed by a cast iron guard; friction clutch on the spindle pulley also is enclosed. No change has been made in the longitudinal and transverse table travels which are obtained by fast and slow motion hand wheels operating traversing screws. The same means of measuring hole spacing has been retained, consisting of a combination of end measures for even inches, inside micrometer for fractions and a micrometer dial for tenthousanths. The former oiling system has been retained.



## Drill Eliminates Spindle Bracket

No. 177

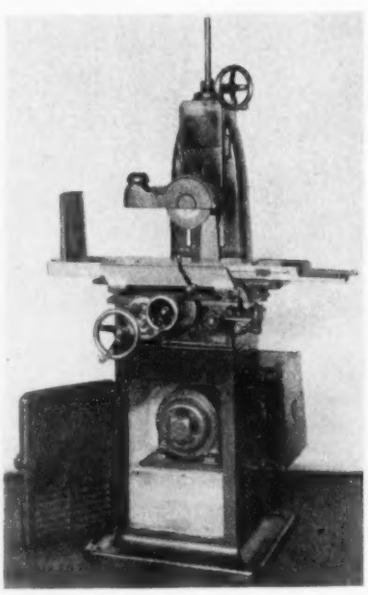
Foote-Burt Co., Cleveland, has brought out a new type sensitive drilling machine with a capacity of 1¼ inches in cast iron and ¾ inches in steel. Due to the length of the spindle travel, the usual spindle bracket has been eliminated. An important feature is the cabinet base which is arranged so that two or more machines may be bolted together to form a gang with 15 inches between spindle centers. The drill may be equipped with automatic power feed and is furnished with either motor or belt drive. Power is transmitted to the spindle through a set of spiral bevel gears and two cone pulleys. Roller bearings are used throughout; all gears run in oil and bearings are pressure lubricated. Three speeds are provided, change being effected by means of a lever on the front of the machine. Spindle is 1⅝ inches in diameter at driving end and is mounted in bronze bushings, using two keyways for driving.

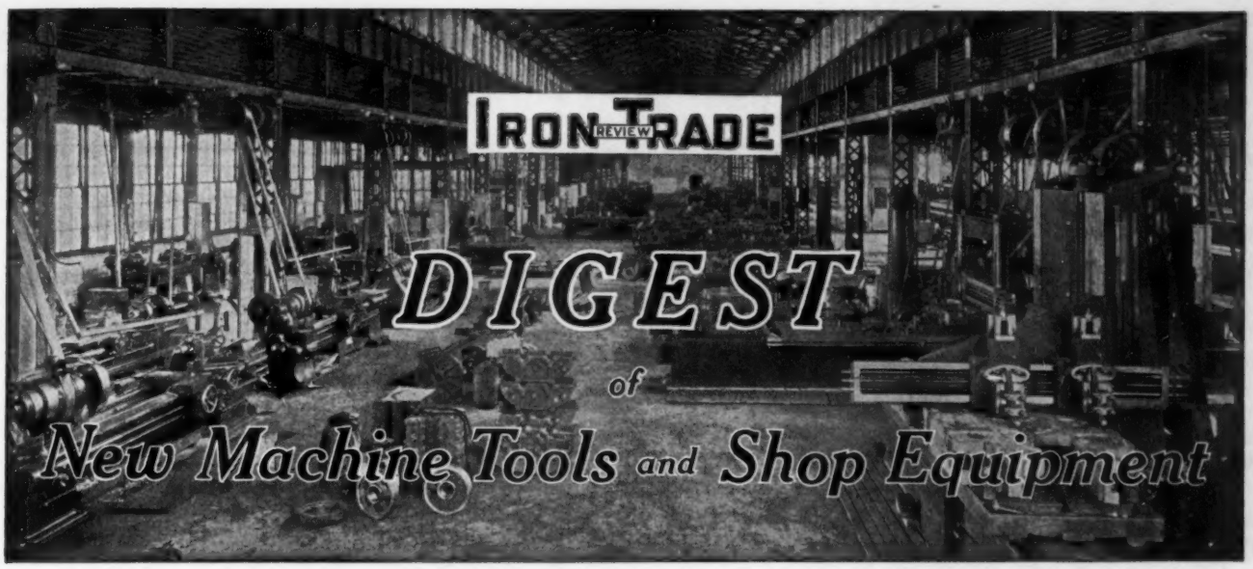


## Grinder Features Enclosed Motor

No. 179

Brown & Sharpe Mfg. Co., Providence, R. I., has added to its line of complete unit machine tools a surface grinding machine with the driving motor enclosed in the base. Motor is of constant speed type and its location protects it from oil and dirt; louvres in the door provide sufficient ventilation. Additional space under the motor shelf is furnished for storing attachments and accessories. Power is transmitted through a belt and pulley system; automatic tightener keeps the belt at the proper tension regardless of the height of the spindle head. Control box is placed on the side of the machine with the pushbutton control in convenient operating position. Longitudinal and transverse table movements are automatic in their action.





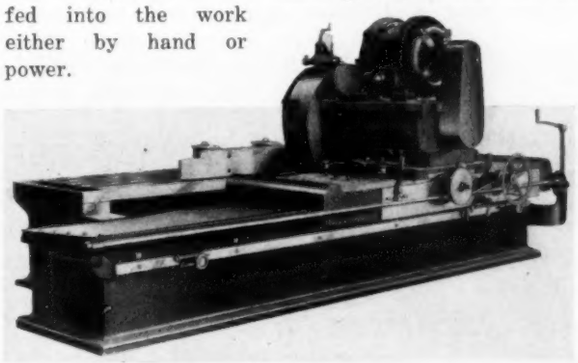

# Buying Hand-to-Mouth but Steady

PURCHASES of machine tool and shop equipment continue to be made at a steady rate, excepting for momentary fluctuations, and indicate that normal operations may be expected for at least the next month or two. As has been the situation for some time past, buying is on a hand-to-mouth basis with tool users replacing or adding equipment only as necessity demands, consequently any fluctuation in the volume of business immediately leaves its imprint on the order books of machine tool builders. With the exception of the automobile industry, which apparently waits to see which way the wind is blowing, buying of shop equipment is general. Production of iron and steel now is on its usual fall increase and some expansion of operations of the metal

## Grinder Features Traveling Wheel

No. 180

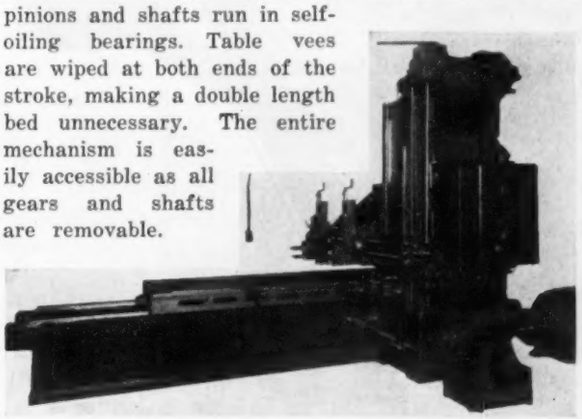
Machinery Co. of America, Big Rapids, Mich., has placed on the market a new type large size surface grinder. The principal feature of the new machine is the stationary work table and traveling grinding wheel; this design, it is claimed, reduces the required floor space one-half and permits more rigid construction, giving greater accuracy in grinding. Traveling wheel carriage is driven through a cut steel gear train which is lubricated automatically. Driving motor is mounted on the carriage and drives both wheel arbor and traverse mechanism, the former through an enclosed silent chain. Carriage also is equipped with hand traverse and controls are located at front and rear of the machine. Abrasive blocks are adjustable for wear and can be installed or replaced easily. A permanent wheel truing device is attached to the wheel guard. Wheel can be fed into the work either by hand or power.



## Large Planer Has been Redesigned

No. 181

Cleveland Planer Co., Cleveland, has redesigned its 36 x 36 x 144-inch open side planer. The new machine is of heavier construction throughout, control levers are placed more conveniently and the forced feed lubrication pipes run inside the bed. Table is of box section with rack extended on both ends so that full length of table can be planed; column is of full box form with no holes in sides or top. The knee has extra length of bearing on the column and is equipped with single turn rail clamp and high-speed rail lift. Rail is of especially heavy construction with taper gibs on the slide and an improved head clamp. All heads have power rapid traverse and by means of the dial system they can be fed at either end of the stroke. Gears are heat treated; all pinions and shafts run in self-oiling bearings. Table vees are wiped at both ends of the stroke, making a double length bed unnecessary. The entire mechanism is easily accessible as all gears and shafts are removable.



fabricating industries may be expected during the balance of the year.

As was the case in September, relatively few manufacturers of machinery announced new models in October. Most of the introductions were redesigns of units already well known by users. In the heavier class of equipment was a 36 x 36-inch x 12-foot open-side planer built by the Cleveland Planer Co. and described as No. 181 in the accompanying digest. This tool is equipped with power rapid traverse to all heads and a dial feed on the end of the rail which can be so regulated that the heads can be fed at either end of the stroke. The bed is heavier and supports the table full length, while the column is full box form without holes in the sides or top.

Two units have been brought out by Pratt & Whitney Co. One, an improved jib borer, is described as No. 178 and the other, a universal die sinker, is described as No. 176. The jig borer has been improved to increase the facility of operation, but the main features remain unchanged with the boring spindle vertical and the table positioned by end measures. The motor drive has been rearranged to make the machine more compact with the motor mounted on a swinging platform. Measurements for spacing of holes includes a combination of end measures for even inches, inside micrometers for fractions of an inch and a micrometer dial for ten thousandths.

The die sinker is a new machine and embodies an entirely new principle. To meet the conditions of cherrying operations, the tool features a special motion which may be imparted to the spindle, this motion permitting an ordinary die sinking cutter to be moved through a circular path so that both roughing and finishing cherrying operations are performed directly without the use of a special cherrying attachment. A simple binding of the oscillating head permits ordinary die sinking work to be done without complicated changes in set-up.

### Drills Crankshaft Oilholes

A special purpose tool developed during the month was a portable horizontal drilling machine designed by the Hoefer Mfg. Co. and described as No. 190. The machine was developed for the drilling of oil holes through the throws of the heavy crankshafts of large-size diesel engines. The size and weight of these shafts make it practically impossible to move them from hole to hole under an ordinary drill press while the use of electric drills would make the cost of machining prohibitive. The machine consists of a long bed affording ample horizontal travel to a column supported on the bed by a saddle. The column can be moved to any position desired and locked in position for the drilling operation. A counterbalanced self-contained head is mounted on the column and carries the motor with pick-off gears.

Foote-Burt Co. has announced the design of a new type of sensitive drilling machine which has many of the features of the smaller capacity sensitive drilling machines built by the same company, including the quick-change speed arrangement, simple drive and automatic swinging idlers. This drill, which is described as No. 177, has a capacity of 1¼ inches in cast iron and ¾-inch in steel and is intended for production work. Due to the length of the spindle travel, it has been possible to eliminate the usual spindle bracket with vertical adjustment and adjustable table used on drilling machines of this capacity. It is designed to be set up for one particular job although it is possible to use various types of jigs on the box type table so that the machine can be used for other jobs.

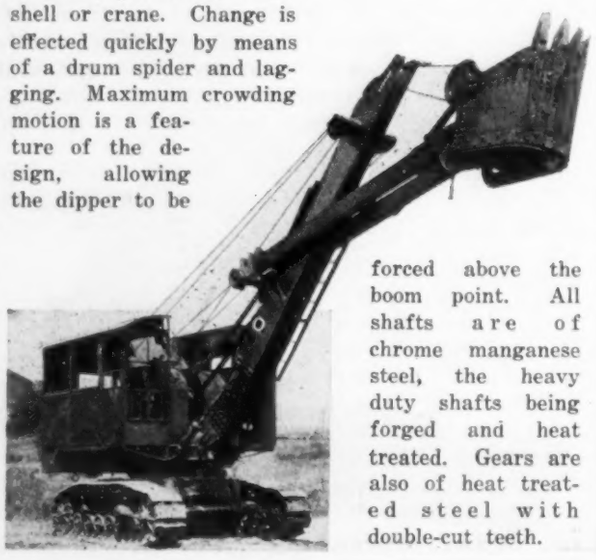
A large size of surface grinder

(*Concluded on Page* 1211)

## Excavator Has Short Tail Swing

No. 182

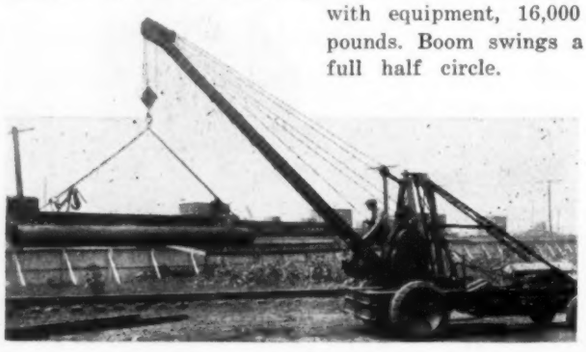
Harnischfeger Sales Corp., Milwaukee, recently has placed on the market a new line of excavators, gasoline driven, with capacities of ½, ¾, 1 and 1¼ cubic yards. Construction throughout is of steel with the revolving frame, car body, etc., consisting of one-piece steel castings. The chief advantage of this new machine, it is stated, is the fact that it has a shorter tail swing than any other excavator of like capacity. All models can be used as shovel, skimmer scoop, hoe, dragline, piledriver, clamshell or crane. Change is effected quickly by means of a drum spider and lagging. Maximum crowding motion is a feature of the design, allowing the dipper to be forced above the boom point. All shafts are of chrome manganese steel, the heavy duty shafts being forged and heat treated. Gears are also of heat treated steel with double-cut teeth.



## Crane Is Built on Tractor Frame

No. 183

Thaleg & Hock, Chicago, have placed on the market a new tractor crane, manufactured by the Vergan Schmidt Co. and intended to supply the need for a light crane that can be moved about rapidly through narrow roadways. The machine is built on a standard tractor chassis of heavy steel construction. Engine is set low in the frame, giving added stability. Wheels are extra heavy and are equipped with standard truck tires, the rear measuring 30 x 5 inches and the front 27 x 3½ inches. Width over rear wheels is 8 feet 6 inches. The mast contains the hoisting and swinging mechanism, is mounted on a machined turntable and revolves on tapered rollers. Boom measures 20 feet between centers and is raised and lowered by means of a power-driven worm gear. Operator rides with the boom and all controls are arranged conveniently. Crane is furnished with a 1/3-cubic yard bucket and weighs with equipment, 16,000 pounds. Boom swings a full half circle.



# Editorials

## New Records Set in Ore Trade

FOR the sixth time in the history of the Lake Superior iron ore industry a season's shipments, this year, are likely to exceed 60,000,000 tons. Demand for ore is a reflection of the generally high rate of blast furnace and steel plant operation, and as requirements in the winter and early spring are anticipated at this time it is evidence of iron and steel producers' confidence.

From present indications the year's ore shipments will be between 60,000,000 and 61,000,000 tons, on a parity with 1920 and 1923. In only three other years, the war periods, 1916, 1917 and 1918, has the movement of Lake Superior ore shown a larger total than 60,000,000 tons. This year is among the best from the standpoint of shipments, while the urgent demand has made prices firmer at their quoted levels than in several years.

While the record of 66,658,466 tons for a year, established in 1916, probably will stand for some time, the notable feature of the trade this year is the speed with which the Great Lakes ore fleet operated during the last half of the season. Demand developed slowly, and when it came full force it threw an extraordinary burden on the carriers during the later months. How well they met this trying circumstance is shown by the monthly shipping records.

The tonnage in July was the largest for any July since 1923. In August all prior monthly records were broken, with 10,709,942 tons. September's total was the largest for that month in the history of the trade, and October's score marks a new high point for that month. November will add about 5,000,000 tons to the sum, and with estimated all-rail shipments of 2,000,000 tons, the full amount for the season will be approximately 61,500,000 tons.

---

## Volume Important Profit Factor

THE iron and steel trade in 1926 has had a demonstration of a decidedly significant fact. This is the extremely important influence of volume production upon profits. Earnings of independent steel companies and of the United States Steel Corp. has shown during this year substantial gains over the corresponding period of 1925. This has been accomplished in the face of falling or depressed prices and can only be explained by enormous outputs at various plants.

For the third quarter the United States Steel Corp. made a surprisingly favorable report with earnings of $52,626,826. This sum exceeded by a good margin any other quarter's net since 1916. It was the highest for any peacetime three-month period in the company's history. During nine months of the year net earnings were $145,502,000, an increase of 18 per cent over earnings of the corresponding period in 1925.

Iron and steel prices during the greater part of the year to date have shown anything but a rising tendency. IRON TRADE REVIEW'S composite market average stood at $39.17 a ton in January. It declined steadily through August, when the average stood at $37.61. During September there was some recovery but the index still is below what it was at the beginning of the year.

It normally would be expected that with the price level showing a reactionary tendency that profits would be correspondingly depressed. However, this year such was not the case. The output of steel ingots has reached a new record level in history. The influence of volume emphasizes the importance of the steel industry keeping on a relatively stable schedule of operations. That is why far-seeing leaders in the industry look with favor on such practices as hand-to-mouth buying which tend to promote steadiness and to avoid unhealthy stimulus eventually resulting in a drastic letdown in operations.

---

"Prince or pauper" used to be said of steel but now it describes bituminous coal. Three months ago unionized coal mines were languishing and many were being closed because the wage scale would not permit competition with nonunion properties. Today union mines are being reopened at rates attracting miners from nonunion fields. Rarely has the coal industry experienced such a reversal.

---

## Europe Also Has Its Barriers

SO MUCH is said in criticism of the American tariff, from within as well as without, that barriers in Europe which interfere seriously with international trade are infrequently considered. The American committee on trade barriers in a recent report to the international chamber of commerce listed such hindrances as double

taxation, lack of international protection of patents, trade marks and designs, lack of centralized credit information, lack of uniformity in commercial letters of credit, inadequacy of the international parcel post, antiquated customs classifications, and cumbersome and complicated customs formalities.

These conditions militate against trade among European nations, comparable to the American states, and find no counterpart in the United States, where state lines have been erased. Regardless of the merit of the tariff issue, it is heartening to realize that some foreign critics of the American tariff system live in glass houses.

## A Minimum Of Legislation Wanted

CONGRESS will break into the headlines again next week when the senate convenes to weigh the impeachment of a federal judge but the legislative wheels will not turn until Dec. 6, when the house also assembles and the short session adjourning at midnight of March 3 is formally under way. Coming after this fall's elections, in which all of the house and more than a third of the senate have stood, legislation will be subject to the scrutiny of many "lame ducks." This again emphasizes the desirability of translating the verdict of the polls more quickly into a changed personnel at Washington.

A wordy session is in prospect. It is a fixed duty that appropriations for the fiscal year beginning July 1 be made but the budget bureau is relieving congress of much detail. The session being in effect a continuation of the preceding long one, legislation introduced and committee work done last year flow over. Bills on banking and immigration are outstanding. Branch banking has the profession sharply divided. While the department of labor would impose alien registration and revise quotas, it will concentrate in immigration matters on a stricter deportation act.

Tariff, taxation and merchant marine loom as major topics to come afresh before the session. The democratic minority doubtless will assault the tariff walls but accomplish nothing more than piling up a record. Much as the administration might want to adjust the present act in some particulars, it is awake to the dangers of opening up the entire act. Much talk and some committee hearings would seem to sum up tariff action at this distance. Never in the history of tariff legislation has there been a revision at the short session.

A determined attack upon the apparent large surplus in the treasury is under way, but the President and secretary of the treasury are insistent it is too early to ascertain the effect of the reduction effective this year. The surplus may dwindle when the Dec. 15 quarterly collection has passed, as the trend has been toward payment of taxes in one or two installments instead of the permissible four. Sound public opinion will accept the final Coolidge-Mellon verdict, certain that this combination appreciates the economic and political significance of a tax reduction.

Last session the senate asked the shipping board to formulate recommendations for a merchant marine policy, and in conformance the board has held hearings. Nothing new has been developed. There seems to be general agreement that a privately-owned and operated merchant fleet is preferable to government operation, but practice does not follow theory readily.

Nothing particularly menacing is in prospect, yet the business community as a whole would probably rather forego the discussions and maneuvering which are threatened. The inequalities of situations are sometimes preferable to the disturbance attending their correction. A minimum of legislation outside of the routine appropriation bills is desirable.

# What Our Readers Are Thinking

## Machinists Merit More Respect

THE machinist is as good a man as the bookkeeper and he gets as much pay. It remains to make him as highly respected a member of the community as the bookkeeper is. Boys will not go into the trades until they and their parents feel that the work is just as desirable as is clerical work; until the molder and pattern maker are just as important in civic organizations and clubs—and in the eyes of young ladies too—as the bank clerk and the insurance office man.—H. S. FALK, *Falk Corp., Milwaukee, in recent address to members of American Socity of Mechanical Engineers, New Haven, Conn.*

## Sees Menace in Growing Population

THE industrial life of America, and the health and well-being of our people, are clearly dependent on future applications, by engineers and physicians, of new discoveries in the physical and biological sciences. If we are to go increasing our population we must either advance in scientific discovery or we must recede in our standard of living. But even of more importance is the advance of human thought, the stimulation to the human mind which comes from the advance of science.—HERBERT HOOVER, *Secretary of Commerce, in foreword to "A New Departure in Higher Education," issued by Johns Hopkins university.*

# The Reader's Page

Vol. LXXIX, No. 19 IRON TRADE REVIEW Nov. 4, 1926

## Coal Situation Analyzed with Facts and Figures

WHAT of the coal situation? That the British miners' strike is exerting a strong influence on the American market, and indirectly affecting pig iron and steel, is evident. With winter needs stimulating demand, and orders pouring in on American operators from abroad, the reason is clear for those operators now paying wages in excess of the Jacksonville agreement. The majority of articles discussing the coal problem have dealt with it in terms of generalities, while facts and figures are what have been most desired. The leading article in this issue of IRON TRADE REVIEW analyzes the situation thoroughly. It was written by H. Cole Estep, former European manager of IRON TRADE REVIEW, and now in the home office as vice president of the Penton Publishing Co. Read it for its concise and definite statement of facts.

Coal Production Increasing.
Page 1159.

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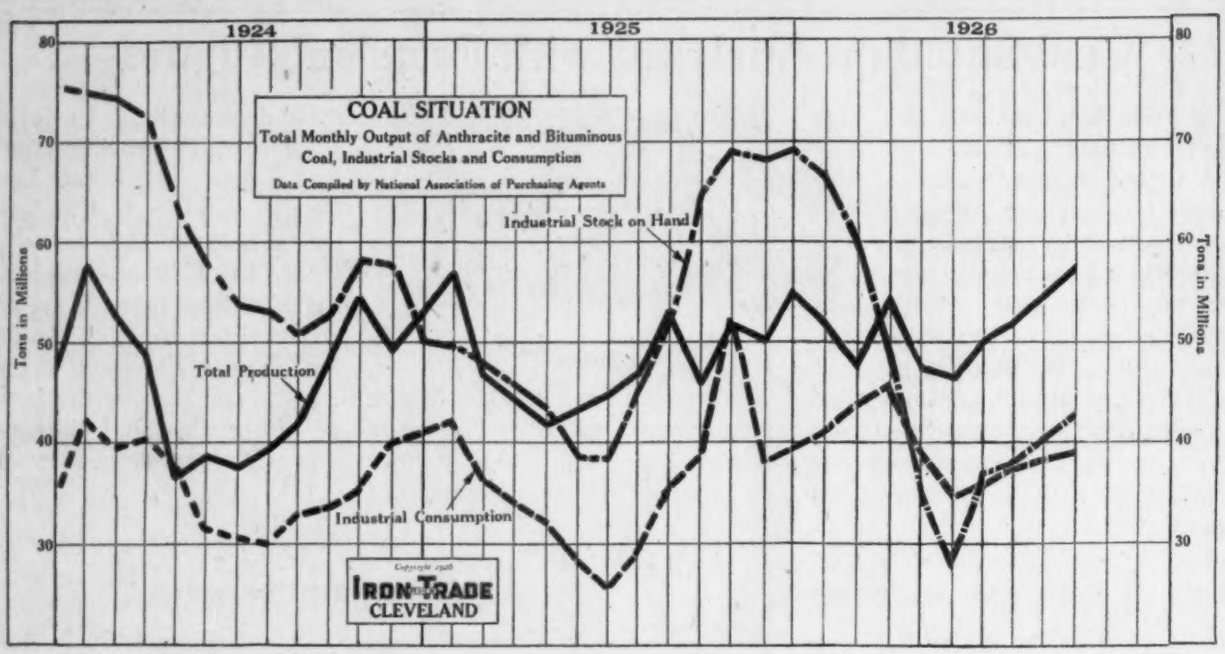
# The Business Trend




## Coal May Have Stimulating Effect

**By John W. Hill, Financial Editor**

DEVELOPMENTS in the coal trade are bringing new influences to bear upon the business situation. After a long period of depression the coal trade recently has leaped into feverish activity. The stimulating force was the extended strike in Great Britain and the sudden appearance of world demand for American fuel.

AS A result of enlarged export demand, prices for coal have soared. Production has been increased to near record levels of around 12,000,000 tons weekly. So uncertain has the market become that many large consumers of coal, although protected by contract, are planning to go into the open market to replenish their stocks on hand.

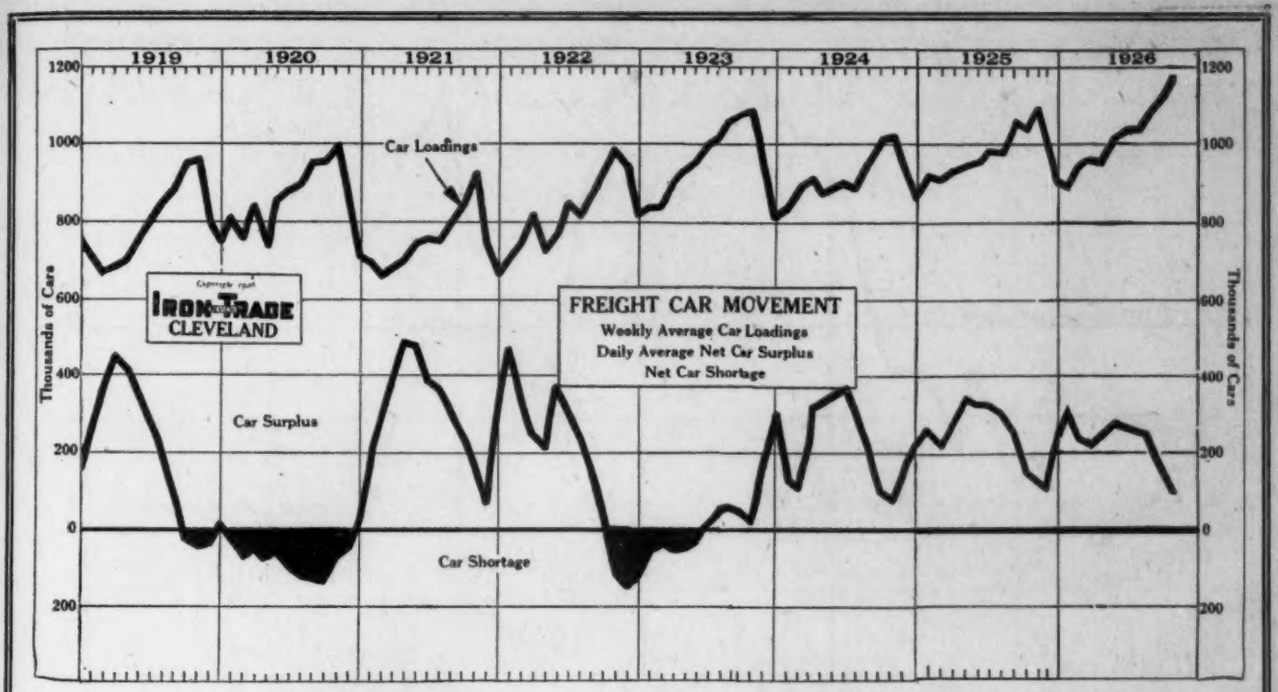
ADDED to the expanded demand as a force contributing to the soaring of prices is the scarcity of open top cars in the coal mine regions. Idle cars have been diminishing rapidly recently and from many sections come complaints of actual shortages. This situation will grow worse as cold weather comes on unless the coal situation eases from other causes.

THE coal situation is affecting other industries, particularly iron and steel. Higher fuel prices will be reflected in increased producing costs of iron and steel. That foreshadows higher prices for these products. If this prospect becomes more definite, buyers now holding back will be forced into the market.

THE flurry in coal and the possibility of stimulated prices and buying in such lines as iron and steel may have come at an opportune moment. Demand has been lagging slightly and production has dropped a little. This tendency, mild as it is, may be checked by events in the coal trade though such effect would be only temporary.

AS SHOWN by the accompanying chart, industrial stocks of coal, computed by the National Association of Purchasing Agents, is far below the level of one year ago. Production and consumption have gained. Although settlement of the British strike may be completed before long, it will be some time before England has filled her own bins and is ready to start after her old markets. Meanwhile, there looms the threat of a soft coal strike in this country.

# The Business Trend

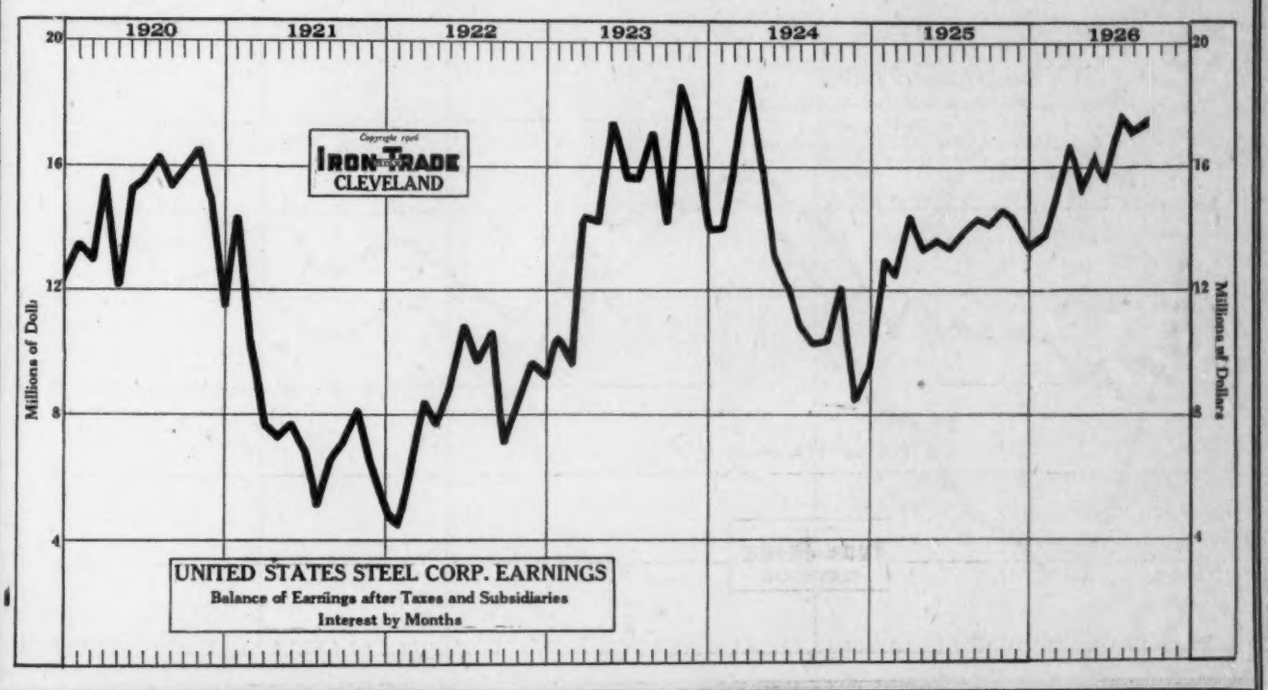



## Freight Car Movement

ONE of the disturbing factors of the present season is the rapidly shrinking car surplus. According to the last report there were about 100,000 surplus cars compared with more than 276,000 cars earlier in the summer. The pinch of the smaller car supply is felt particularly in the coal industry where actual shortages of open top cars are reported. Meanwhile, the loadings of freight continue to establish new high records. The September total broke all records for that month.

## Steel Corp. Earnings

EARNINGS of the United States Steel Corp. for the third quarter of 1926 were the highest for any other three months in eight years. They were the greatest of any peacetime quarter in the company's history. The total net earnings amounted to $52,626,826. The best month of the year was July and this showed the highest earnings since March, 1924. August showed a slight decline but September brought recovery. During nine months net earnings of the corporation were $145,502,000.



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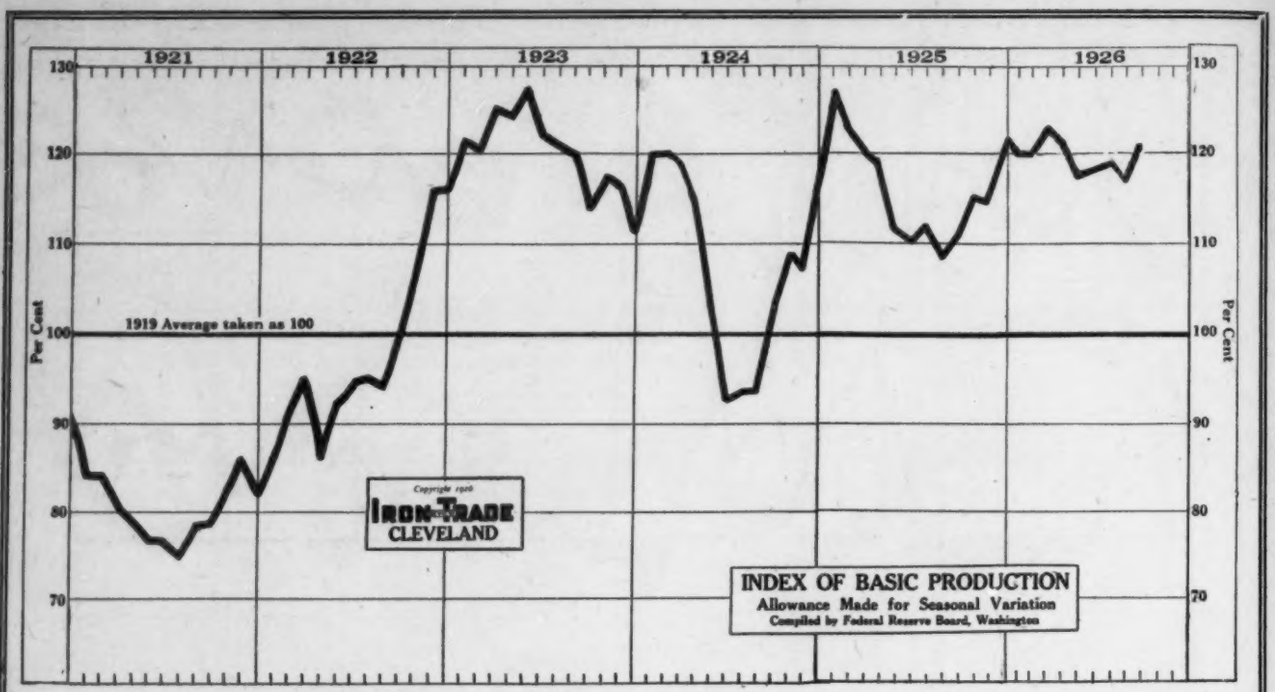
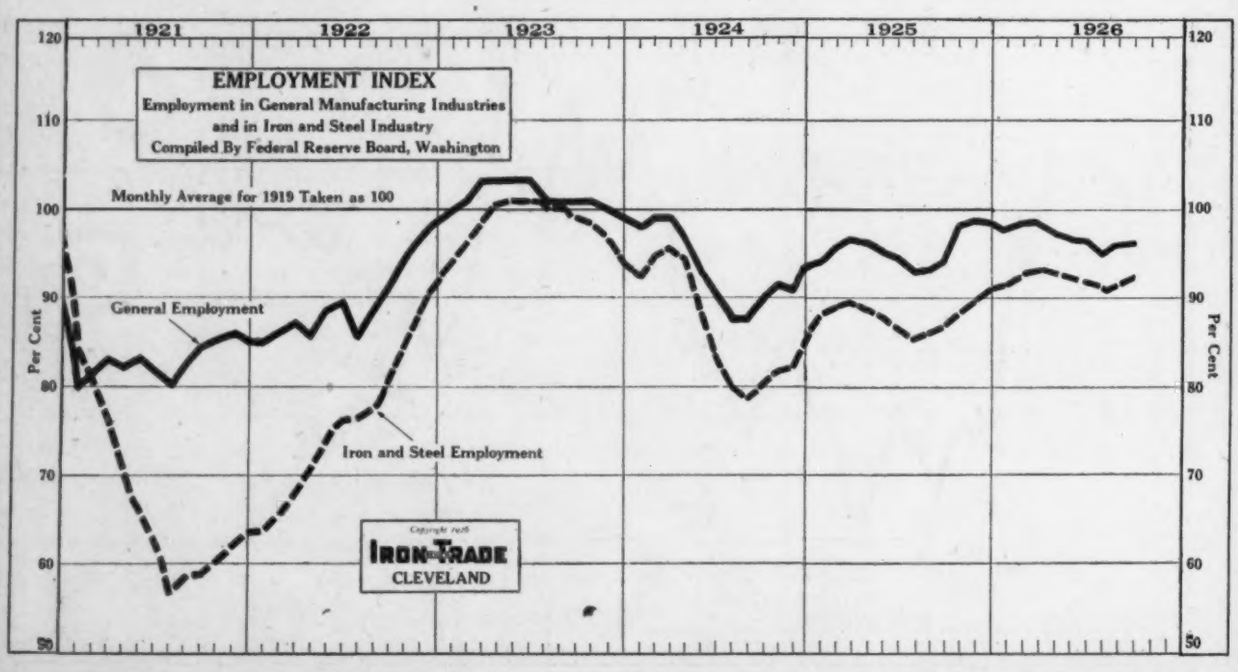



## Basic Production

PRODUCTION in basic industries during September climbed to the highest level reached since last April. The index compiled by the federal reserve board stood at 121 for September. This was a sharp gain over the index of 116 in August which marked the low point of the year. In September, 1925, the index stood at 111. An increase of 10 points over one year ago is shown in September of this year. The high point of the year 1926 was in March when the index was at 123.

## Employment Index

SEPTEMBER brought some increase in employment, both for general industrial plants and for iron and steel works. The index for the month, as computed by the federal reserve board, stood at 92.7 per cent of the 1919 average for iron and steel employment against 91.7 per cent in August and 86.6 per cent in September, 1925. Total employment stood at 95.8 per cent in September against 94.4 per cent in August and 95.1 per cent of the 1919 average in September, 1925.



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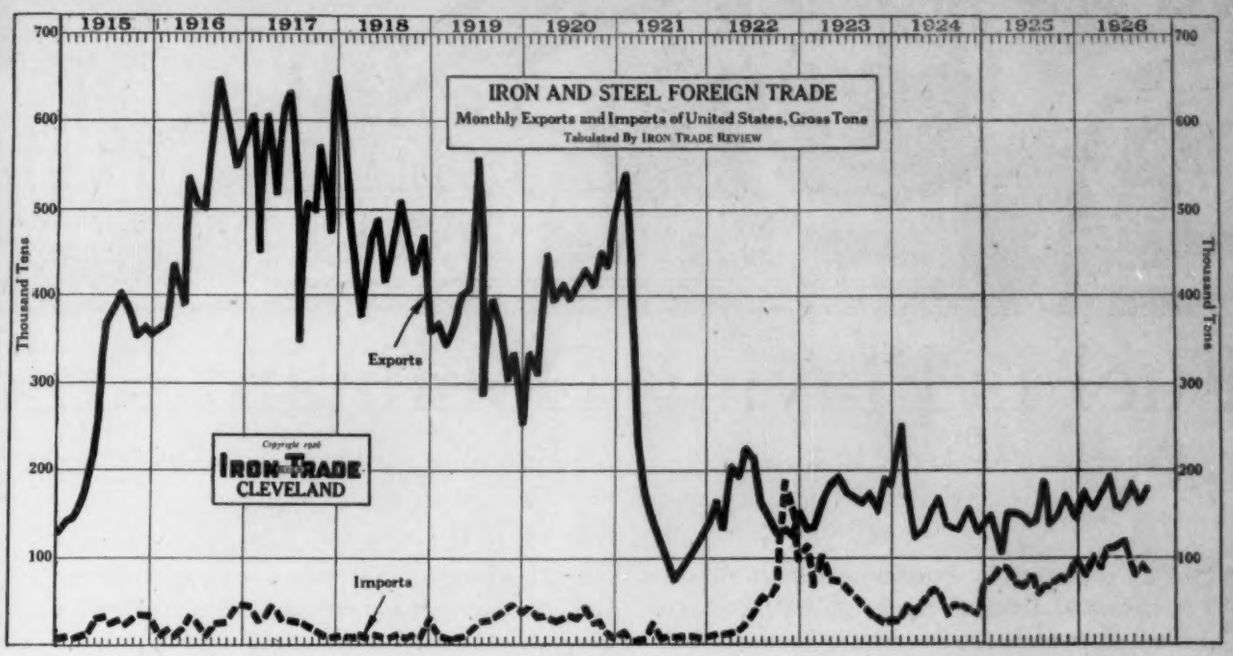
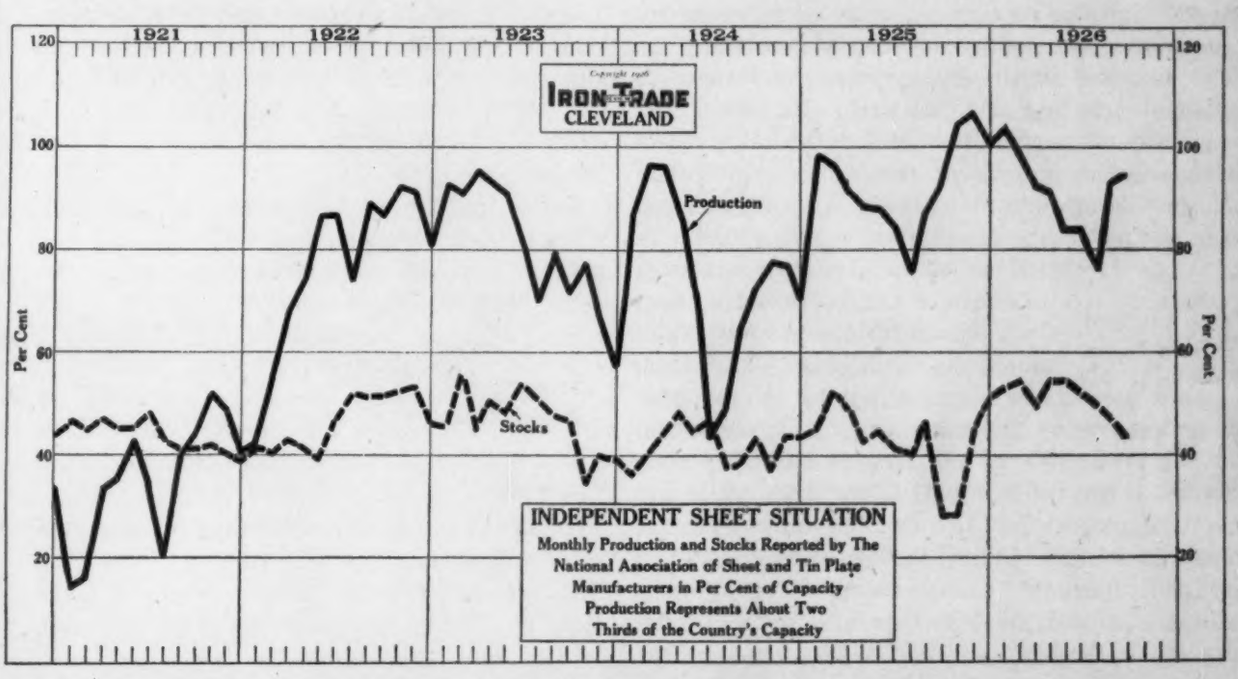



## Steel Foreign Trade

EXPORTS of iron and steel from this country in September increased over August and over one year before. The total for the month was 182,071 tons against 171,588 tons in August and 136,791 tons in September, 1925. Imports showed a decrease for the month, being 85,484 tons against 91,578 tons in August and 68,445 tons in September, 1925. Pig iron imports are diminishing, the September total being 17,508 tons against 26,538 tons in August. Scrap imports also are less.

## Independent Sheets

PRODUCTION in the independent sheet industry as reported by the National Association of Sheet & Tin Plate Manufacturers showed an increase in September. For that month output was 96 per cent of capacity of mills in the association, which represents about two-thirds of the country's capacity, as compared with 92 per cent in August. During the month there was a healthy decline in stocks to 42 per cent of capacity against 45 per cent one month before.



# Fuel Is Playing Dominant Role

Rising Coke Market Is Reflected in Iron and Gives Steel Better Undertone—October Iron Output Tops September and Is Third Best October—Lake Ore Movement Sets New High Mark

FUEL, sensitive to expanding export demand, is the chief influence today in iron and steel. Blast furnace coke has risen 50 per cent in a month to a minimum of $5 to $6, and by reason of wage clauses in many contracts, this rise is largely being passed on to consumers. Pig iron, naturally, has reacted first. Advances of 50 cents to $1 at Pittsburgh and in the Mahoning valley, 50 cents at Cleveland and in eastern Pennsylvania and $1 in southern Ohio silvery irons have been recorded in the week, and some producers have become as reluctant to commit as some consumers are to protect themselves. Finished steel has not yet vibrated but an undertone of strength has been imparted.

Well informed opinion in the iron and steel industry is that the British coal strike, underlying the flurry in American fuel, is nearing its end but that peace necessarily will be followed by some weeks of adjustment. In the meantime, the wage situation in the Pennsylvania and adjacent coal and coke regions has been disturbed, and practically all workers now are on the basis of the Jacksonville wage scale or even better. With the Jacksonville agreement expiring April 1, the coal wage situation has been given a new aspect.

**Iron Output Shows Gain**

October in retrospect looms as a good month and bears out opinion that consumption has been maintained on a higher plane than the reluctant buying of the past three weeks has indicated. In substantiation, October production of pig iron at 3,321,177 tons was the largest for any October since 1918 and the third largest for any October on record. It compares with 3,163,269 tons in September and 3,017,889 tons in October, 1925. The October daily rate of 107,134 tons compares with 105,442 tons in September and only 97,351 tons in last October. Pig iron production is practically one month ahead of last year; with only 83 per cent of the year gone, output is 90 per cent of the 1925 total. November opens with two more blast furnaces active than at the beginning of October.

**Shrinkage In Steel Slight**

Finished steel presents a satisfactory market in spite of the cautious spirit which consumers exhibit in buying. October bookings were probably 5 to 8 per cent below those of September, but tonnage shipped during the month approximated the September total. If the months winding up quarters are eliminated, October measures up to the average of the year. In the face of keen competition for going business, prices of finished steel are well maintained.

Indicative of the confidence displayed by primary producers in the coming months, the Great Lakes iron ore movement this year promises to pass 60,000,000 tons, a mark exceeded only in the war years 1916, 1917 and 1918 and equaled by 1920 and 1923. The 9,337,463 tons brought down in October set a new high mark for October for all time.

Reflecting the strengthening fuel and pig iron situations, ferromanganese is now selling at $100 per ton for November-December delivery. A short time ago the market was $88.

**Structurals Show Life**

Structural activity at New York has revived with 30,000 tons of work pending, including 11,500 tons for subways, 9000 tons for a New York Central railroad office building and 7500 tons for the New York Athletic club. If the interstate commerce commission sanctions the construction of the proposed link in Ohio between the Chesapeake & Ohio and Hocking Valley railroads about 10,000 tons of bridge work will be placed.

Reports of curtailed buying of finished steel

prompted by taking of inventory are coming earlier than usual. Shortened schedules of many Michigan automotive interests are ascribed in part to this condition.

Chicago mills have placed 120,000 tons of rails on their books in the past week, and already have definite orders for well over half of the 800,000 tons they will probably roll for the 1927 season.

As has been the case for the last eight weeks, IRON TRADE REVIEW composite of 14 leading iron and steel products has registered a gain. This week it is $38.30, compared with $38.18 last week. Six months ago it was $38.39 and one year ago, $38.44.

# Prices, Present and Past

**Representative Market Figures for This Week, Last Month, Three Months and One Year Ago**

| | Nov. 3, 1926 | Oct., 1926 | Aug., 1926 | Nov., 1925 |
|---|---|---|---|---|
| **PIG IRON** | | | | |
| Bessemer, valley, del., Pittsburgh | $21.26 | 20.86 | 19.76 | 22.61 |
| Basic, valley | 18.50 | 17.85 | 17.50 | 19.85 |
| Basic, eastern del., eastern Pa. | 22.00 | 21.00 | 21.00 | 22.70 |
| *No. 2 foundry, del., Pittsburgh | 20.26 | 20.11 | 19.26 | 22.11 |
| No. 2 foundry, Chicago | 21.00 | 21.00 | 21.00 | 22.75 |
| *Southern No. 2, Birmingham | 20.00 | 20.00 | 21.00 | 21.00 |
| *Southern Ohio, No. 2 Ironton | 20.00 | 20.00 | 19.90 | 21.00 |
| **No. 2X, Virginia furnace | 22.75 | 22.50 | 22.75 | 23.00 |
| **No. 2, eastern del., Phila. | 23.26 | 22.51 | 22.01 | 24.01 |
| Malleable, valley | 19.00 | 18.35 | 17.50 | 20.35 |
| Malleable, Chicago | 21.00 | 21.00 | 21.00 | 22.75 |
| Lake Superior charcoal, Chicago | 27.04 | 27.04 | 29.04 | 29.04 |
| Gray forge, val., del., Pittsburgh | 20.26 | 19.61 | 19.01 | 21.61 |
| Ferromanganese, del., Pittsburgh | 104.79 | 99.79 | 92.79 | 119.79 |
| *1.75 to 2.25 silicon. **2.25 to 2.75 silicon. | | | | |
| **COKE** | | | | |
| Connellsville, furnace, ovens | 5.00 | 3.65 | 2.85 | 6.35 |
| Connellsville, foundry, ovens | 6.00 | 4.65 | 3.60 | 6.85 |
| **SEMIFINISHED MATERIAL** | | | | |
| Sheet bars, open-hearth, Youngstown | 36.00 | 36.00 | 36.00 | 35.25 |
| Sheet bars, open-hearth, Pittsburgh | 36.00 | 36.00 | 36.00 | 35.25 |
| Billets, open-hearth, Pittsburgh | 35.00 | 35.00 | 35.00 | 35.00 |
| Wire rods, Pittsburgh | 45.00 | 45.00 | 45.00 | 45.50 |
| **FINISHED MATERIAL** | | | | |
| Steel bars, Pittsburgh | 2.00 | 2.00 | 2.00 | 2.00 |
| Steel bars, Chicago | 2.10 | 2.10 | 2.10 | 2.10 |
| Steel bars, Philadelphia | 2.32 | 2.32 | 2.27 | 2.32 |
| Iron bars, Philadelphia | 2.27 | 2.22 | 2.27 | 2.22 |
| Iron bars, Chicago, mill | 2.00 | 2.00 | 2.00 | 2.00 |
| Beams, Pittsburgh | 2.00 | 2.00 | 2.00 | 1.85 |
| Beams, Philadelphia | 2.22 | 2.22 | 2.32 | 2.17 |
| Beams, Chicago | 2.10 | 2.10 | 2.10 | 2.10 |
| Tank plates, Pittsburgh | 1.90 | 1.90 | 1.90 | 1.85 |
| Tank plates, Philadelphia | 2.22 | 2.22 | 2.22 | 1.92 |
| Tank plates, Chicago | 2.10 | 2.10 | 2.10 | 2.10 |
| Sheets, black, No. 24, Pittsburgh | 3.10 | 3.05 | 3.10† | 3.25† |
| Sheets, blue anl., No. 10, Pittsburgh | 2.40 | 2.35 | 2.30 | 2.40 |
| Sheets, galvanized, No. 24, Pittsburgh | 3.95 | 3.90 | 4.30† | 4.50† |
| Sheets, black, No. 24, Chicago | 3.20 | 3.25 | 3.25† | 3.45† |
| Sheets, blue anl., No. 10, Chicago | 2.50 | 2.55 | 2.45 | 2.60 |
| Sheets, galvanized, No. 24, Chicago | 4.05 | 4.10 | 4.45† | 4.70† |
| Wire nails, Pittsburgh | 2.65 | 2.65 | 2.65 | 2.65 |
| Wire nails, Chicago | 2.70 | 2.70 | 2.70 | 2.70 |
| Tin plate per base box, Pittsburgh | $5.50 | 5.50 | 5.50 | 5.50 |
| †Based on No. 28 gage. | | | | |
| **OLD MATERIAL** | | | | |
| Heavy melting steel, Pittsburgh | 17.00 | 17.00 | 17.75 | 19.50 |
| Heavy melting steel, eastern Pa. | 16.25 | 16.65 | 16.75 | 17.60 |
| Heavy melting steel, Chicago | 13.00 | 13.05 | 14.00 | 16.40 |
| No. 1 wrought, eastern Pa. | 17.00 | 17.00 | 17.25 | 18.75 |
| No. 1 wrought, Chicago | 14.00 | 14.50 | 14.75 | 17.70 |
| Rails for rolling, Chicago | 16.50 | 16.65 | 17.25 | 19.40 |

## Composite Market Average

**The Fourteen Leading Iron and Steel Products Included are Pig Iron, Billets, Slabs, Sheet Bars, Wire Rods, Steel Bars, Plates, Structural Shapes, Black, Galvanized and Blue Annealed Sheets, Tin Plate, Wire Nails and Black Pipe**

| | |
|---|---|
| This week (Nov. 3, 1926) | $38.30 |
| Last week (Oct. 27, 1926) | 38.18 |
| One month ago (October, 1926) | 38.08 |
| Three months ago (August, 1926) | 37.61 |
| One year ago (November, 1925) | 38.73 |
| Ten years ago (November, 1916) | 46.77 |
| Thirteen years ago (November, 1913) | 24.02 |

# Late News Flashes

### Early Specifications Help Rail Mills

Chicago, Nov. 2.—Schedules of western rail mills are being stepped up gradually. Wisconsin Steel Co. is bringing in a new structural mill. Steel ingot production is about 85 per cent.

### Pittsburgh Ingot Average Is 80 Per Cent

Pittsburgh, Nov. 2.—Steel ingot production keeps up to about 80 per cent here. Some interests are below 75 per cent, but the United States Steel Corp. is slightly above 80. Schedules are holding better in this district than in the Mahoning valley. Production among the minor finished steel products is shrinking somewhat. Wire is nearer 50 than 60 per cent, strip steel varies between 55 and 60, and nuts and bolts 60 to 70.

### Pig Iron Rate Adjustment Deferred

Washington, Nov. 2.—Interstate commerce commission has suspended until March 1 certain schedules which propose a general readjustment of rates on pig iron and articles taking the same rates between points in the Central Freight association territory. Typical of the changes, the rate on pig iron from Chicago to Benton Harbor would be increased from $1.89 to $2.15 per gross ton, to South Bend, Ind., it would be raised from $1.89 to $2.05, and to Lafayette, Ind., it would be decreased from $2.65 to $2.40. The proposed new rate from Pittsburgh to South Bend is $4.30, a decrease of 80 cents, and from Youngstown to St. Joseph, Mich., $4.20, a cut of 59 cents.

### Entente Jumps Output 1,500,000 Tons

Washington, Nov. 2.—The recently-formed European steel entente has agreed to increase production in the current quarter to 8,000,000 metric tons, or on the basis of 32,000,000 tons annually. This is 1,500,000 tons more than the maximum annual total previously fixed, according to Commercial Attache Chester Lloyd Jones, at Paris, in a cable to the department of commerce. The percentage of participation is Germany 43.17 per cent, France 31.19, Belgium 11.56, Luxemburg 8.30 and the Saar 5.78. The new quotas will increase the participating production of all signatory parties to approximately 100 per cent of capacity with the exception of Germany, which will be increased to 80.

A supplementary agreement between France, Germany and Luxemburg signed Oct. 28, provides that the further needs of the Saar basin for hematite pig iron will be supplied jointly by France and Germany, on a 55 and 43 per cent basis, respectively. The question of the admission of pig iron into Germany is still pending.

# Current Rolled Steel Prices

**PRICES, CENTS PER POUND, UNLESS OTHERWISE STATED**

## Semifinished Material

**Prices per gross ton**

**BILLETS AND BLOOMS**

**4 x 4-inch base**

| | |
|---|---|
| Pittsburgh, open-hearth | $35.00 |
| Pittsburgh, bessemer | 35.00 |
| Youngstown | 35.00 |
| Philadelphia | 40.30 |
| Chicago | 35.00 |
| Forging, Pittsburgh | 40.00 |
| Forging, Philadelphia | 45.30 |

**SHEET BARS**

| | |
|---|---|
| Pittsburgh | $36.00 |
| Youngstown | 36.00 |

**SLABS**

| | |
|---|---|
| Pittsburgh | $35.00 |
| Youngstown | 35.00 |

**WIRE RODS**

| | |
|---|---|
| Pittsburgh | 45.00 |
| Cleveland | 45.00 |
| Chicago | 46.00 |

Standard extras, $5 for screw stock; $15 for acid wire rods. Carbon extras, $3 for 0.20 to 0.40; $5 for 0.41 to 0.55; $7.50 for 0.56 to 0.75; $10 over 0.75.

**SKELP**

| | |
|---|---|
| Grooved skelp | 1.90c |
| Universal skelp, Pittsburgh | 1.90c |
| Sheared skelp, Pittsburgh | 1.90c |

## Structural Shapes

| | |
|---|---|
| Pittsburgh | 2.00c |
| Philadelphia | 2.17c to 2.32c |
| New York | 2.19c to 2.34c |
| Chicago | 2.10c |
| Cleveland | 2.19c |
| Birmingham | 2.15c to 2.25c |

## Steel Plates

| | |
|---|---|
| Pittsburgh | 1.90c |
| Philadelphia | 2.22c |
| New York | 2.24c |
| Chicago | 2.10c |
| Cleveland | 2.09c |
| Birmingham | 2.05c to 2.15c |

## Iron and Steel Bars

| | |
|---|---|
| Pittsburgh, soft steel | 2.00c to 2.10c |
| Pittsburgh, cold finishing | 2.15c |
| Pittsburgh, forging quality | 2.15c |
| Philadelphia, soft steel | 2.32c to 2.42c |
| New York, soft steel | 2.34c to 2.44c |
| Chicago, soft steel | 2.10c |
| *Cleveland, soft steel | 2.00c to 2.19c |
| Birmingham, soft steel | 2.15c to 2.25c |
| San Francisco, soft steel | 2.60c |
| Pittsburgh, refined iron | 3.00c to 4.50c |
| Pittsburgh, reinforcing billet | 2.00c to 2.10c |
| Youngstown, reinf. billet, base | 1.90c to 2.00c |
| Chicago, rail steel | 2.00c |
| Mill, rail steel | 1.80c |
| Philadelphia, common iron | 2.22c to 2.32c |
| New York, common iron | 2.24c to 2.34c |
| Chicago, common iron | 2.00c |

*The 2.00c price applies to a limited range of forms and sizes.

## Hoops, Bands, Strips

| | |
|---|---|
| Hoops, Pittsburgh, 6 inches and under | 2.50c |
| Bands, Pittsburgh, 6 inches and under | 2.50c |
| Bands, Pittsburgh over 6 in. | 2.30c |
| Hot rolled strip steel, Pittsburgh, stamping quality, over 6 in. | 2.30c |
| Hot rolled strip steel, Chicago | 2.50c to 2.60c |
| Bands, Chicago, under 6 inches | 2.60c |
| Bands, Chicago, 6 in. and over | 2.50c |
| Cold rolled strip steel, hard coils, 1⅛ inches and wider by 0.100-inch and heavier, base, Pittsburgh | 3.25c to 3.60c |
| Worcester Mass | 3.90c |
| Chicago | 3.80c to 4.05c |

## Cold Finished Steel

| | |
|---|---|
| Cold finished steel bars, drawn, or rolled, Pittsburgh, Chicago carloads | 2.40c |
| Less carload | 2.50c to 2.65c |
| Steel shafting turned and polished Pittsburgh, Chicago | 2.60c |

Screw stock base Cleveland $1 higher than Pittsburgh and Chicago.

## Hot Rolled Alloy Steel

**Pittsburgh or Chicago**

S. A. E. Series—

| | |
|---|---|
| 2300 (3½ per cent nickel) | 4.40c to 4.50c |
| 3100 (Nickel chromium) | 3.40c to 3.50c |
| 6100 (Chrome vanadium) | 4.25c to 4.30c |
| 6100 (Chrome vanad. spring) | 3.85c |
| 9250 Silico-mang. spring) | 3.25c |

## Rails, Track Material

| | |
|---|---|
| Standard bessemer rails, mill | $43.00 |
| Standard open-h'th rails, mill | 43.00 |
| Relaying rails, St. Louis | 24.00 to 31.00 |
| Relaying rails, Pittsburgh | 23.00 to 25.00 |
| Light rails, 25 to 45, mills | 36.00 |
| Angle bars, Chicago base | 2.75c |
| Spikes, railroad, Pittsburgh | 2.80c to 2.90c |
| Spikes, small railroad, 7-16-inch and smaller, Pitts | 2.90c to 3.00c |
| Spikes, boat and barge, Pitts. | 3.10c |
| Spikes, railroad, Chicago | 2.90c |
| Track bolts, Pitts. standard | 3.90c to 4.25c |
| Track bolts, Chicago | 3.90c |
| Tie plates, Chicago | 2.35c |
| Tie plates, Pittsburgh | 2.35c |

## Wire Products

**To Jobbers in Carloads**

Dealers 5 cents per 100 pounds extra F.o.b. Cleveland and Pittsburgh base.

| | |
|---|---|
| Wire nails | 2.65c |
| Galvanized nails smaller than 1-inch | 4.90c |
| Galv'd nails, 1-inch and over | 4.65c |
| Plain wire | 2.50c |
| Annealed wire | 2.65c |
| Galvanized wire No. 9 gage | 3.10c |
| Barbed wire, painted | 3.10c |
| Barbed wire, galvanized | 3.35c |
| Polished staples | 3.10c |
| Galvanized staples | 3.35c |

Coated nails, 100 pound kegs, subject to card of extras Sept. 1, 1926, over regular wire nail base.

Woven wire fencing (retailers) 12½ gage, 26-in. high 7-in. bars and 12-in. stays, per 100 rods, f.o.b. Pitts. $20.03

Joliet, DeKalb and Waukegan, Ill., and Anderson, Ind., prices $1 per ton over Cleveland-Pittsburgh base on products made there; Duluth $2 higher, Worcester, Mass., and Fairfield, Ala., $3 higher.

## Sheets

**SHEET MILL BLACK**

| | |
|---|---|
| No. 24, Pittsburgh, base | 3.10c |
| No. 24, Philadelphia, delivered | 3.42c |
| No. 24, Gary, Indiana Harbor | 3.20c |
| No. 24, Chicago, delivered | 3.25c |

**TIN MILL, BLACK**

| | |
|---|---|
| No. 28, Pittsburgh | 3.25c |
| No. 28, Gary base | 3.35c |

**GALVANIZED**

| | |
|---|---|
| No. 24, Pittsburgh, base | 3.95c |
| No. 24, Philadelphia, delivered | 4.27c |
| No. 24, Gary, Indiana Harbor | 4.05c |
| No. 24, Chicago, delivered | 4.10c |

**BLUE ANNEALED**

| | |
|---|---|
| No. 10, Pittsburgh, base | 2.40c |
| No. 10, Philadelphia, delivered | 2.72c |
| No. 10, Gary, Indiana Harbor | 2.50c |
| No. 10, Chicago, delivered | 2.55c |

**AUTOMOBILE SHEETS**

| | |
|---|---|
| No. 20, Pittsburgh, base | 4.25c |

## Tin and Terne Plate

**Prices per 100-pound box, Pittsburgh**

| | |
|---|---|
| *Tin plate, coke base | $5.50 |

Gary, Ind., base 10 cents higher.

| | |
|---|---|
| Long ternes, No. 24, base | 4.30 |

*This price is subject to quantity differentials established by individual regulations.

## Iron and Steel Pipe

**Base Discounts Pittsburgh and Lorain, O. to Jobbers in Carloads**

| | Black | Galv. |
|---|---|---|
| 1 to 3-inch butt steel | 62 | 50½ |
| 1 to 1½-inch, butt iron | 30 | 13 |

Indiana Harbor, Ind., and Evanston, Ill., 2 points less and $4 per ton higher. Chicago delivered 2½ points less and $5 per ton higher.

## Boiler Tubes

**Less Carload Discounts—Carloads 4 Points Additional—F.o.b. Pittsburgh Mills**

| | |
|---|---|
| Steel 3¼ to 3¾-inch | 68½ |
| Charcoal iron, 3¼ to 4½-inch | 5 |
| Seamless hot rolled 3¼ to 3½-inch | 46 off |

Additional discounts of seven 5 per cents being allowed for carloads and six 5 per cents for less-carload, on Japanned steel. On seamless hot rolled several additional 5 per cents are allowed.

## Chain, Piling, Cut Nails

| | |
|---|---|
| Chain, 1-in. proof coil, Pitts. | 6.00c |
| Sheet piling base, Pittsburgh | 2.25c to 2.30c |
| Cut nails, c. l., f.o.b. mills | 2.80c |

## Cast Iron Water Pipe

**Prices per net ton**

**Class B Pipe**

| | |
|---|---|
| Four-inch, Chicago | $51.20 to 52.20 |
| Six-inch to 24-inch, Chicago | 47.20 to 49.20 |
| Over 24-inch, Chicago | 45.20 |
| Four-inch, Birmingham | 43.00 to 44.00 |
| Six-inch and over, Birming'm | 39.00 to 40.00 |
| Four-inch, New York | 56.50 to 57.60 |
| Six-inch and over, New York | 51.50 to 52.60 |
| Standard fittings, Birmingham base | $110.00 |

6 to 24-inch, base; over 24-inch, plus $20; 4-inch, plus $20; 3-inch, plus $20; gas pipe fittings, $5 higher.

Class A pipe is $5 higher than Class B

## Nuts and Bolts

F.o.b. basing points, Pittsburgh, Cleveland, Birmingham and Chicago.

| | |
|---|---|
| Hot pressed square tapped or blank | $4.00 off list |
| Hot pressed hexagon tapped or blank | $4.40 off list |
| Cold punched square or hexagon blank | $4.10 off list |
| Cold punched square or hexagon tapped or blank | $4.10 off list |
| Cold punched U. S. S. semifinished hexagon nuts ⅝-inch and larger | 75, 10 and 5 off |
| Cold punched U. S. S. semifinished hexagon nuts 9/16-inch and smaller | 80, 10 and 5 off |
| Cold finished S. A. E. semifinished ⅝-inch and larger | 75, 10 and 5 off |
| Cold finished S. A. E. semifinished 9/16-inch and smaller | 80, 10, 10 and 5 off |

**CARRIAGE BOLTS**

(⅝ x 6-inch, smaller and shorter)

| | |
|---|---|
| Rolled thread | 50, 10 and 10 off |
| Cut thread (all sizes) | 50 and 10 off |
| Eagle carriage bolts (Eagle list) | 65 and 10 off |

**MACHINE BOLTS**

(⅜ x 4-inch, hot pressed nuts)

| | |
|---|---|
| Rolled thread | 60 and 10 off |
| Cut thread | 50, 10 and 10 off |

(All sizes cold punched nuts)

| | |
|---|---|
| Cut thread | 45 10 and 5 off |
| Lag screws | 60, 10 and 10 off |
| Plow bolts Nos. 3 and 7 heads | 50 and 10 off |
| All other standard heads | 50 and 10 off plus 20 per cent |
| Tap bolts | 30 off |
| Bolt ends with hot pressed nuts | 50, 10 and 10 off |
| Bolt ends with cold punched nuts | 45, 10 and 5 off |
| Blank bolts | 50, 10 and 10 off |
| Rough stud bolts with nuts (250 pieces or more of a size) | 40 and 10 off |
| Stove bolts, 80, 10 and 5 off in bulk. In packages, 80, 10 and 5 plus 2½ off. | |
| Tire bolts | 60 and 5 off |

**SEMIFINISHED CASTELLATED AND SLOTTED NUTS**

Per 1000, f.o.b. producer's plant, freight allowed

| | S.A.E. Castellated | U.S.S. Slotted |
|---|---|---|
| ¼ | $ 4.40 | $ 4.40 |
| 5/16 | 5.15 | 5.15 |
| ⅜ | 6.20 | 6.60 |
| 7/16 | 7.90 | 9.00 |
| ½ | 10.10 | 10.50 |
| 9/16 | 13.80 | 14.20 |
| ⅝ | 17.00 | 17.30 |
| ¾ | 28.50 | 24.00 |
| ⅞ | 36.00 | 36.00 |
| 1 | 55.50 | 58.00 |
| 1⅛ | 89.00 | 89.00 |
| 1¼ | 126.00 | 131.00 |
| 1⅜ | 183.50 | 183.50 |
| 1½ | 210.00 | 210.00 |

Larger sizes—Prices on application

**HEXAGON CAP SCREWS**

| | |
|---|---|
| Milled | 80 and 10 off |
| Upset | 80, 10 and 10 off |

**SQUARE HEAD SET SCREWS**

| | |
|---|---|
| Milled | 80 and 5 off |
| Upset | 80, 10 and 5 off |

## Rivets

| | |
|---|---|
| Structural rivets, carloads, Pittsburgh and Cleveland | 2.50c to 2.60c |
| Structural rivets, carloads, Chicago | 2.60c to 2.75c |

**Rivets, 7/16-inch and smaller, Pittsburgh, Cleveland, 70, 10 and 5 to 70 and 10 off.

**Rivets, 7/16-inch and smaller, Chicago 70, 10 and 5 to 70 and 10 off

**Some makers quoting 70 off with freight allowed on 300 pounds or more.

## Washers

| | |
|---|---|
| Wrought c.l., Chicago dist. | $6.40 to 6.50 off |
| Wrought c.l., Pitts. dist | 6.75 off |
| Lock washers, f.o.b. factory | 85 to 90 off |

# Pig Iron

**Brisk Buying Before Prices Are Advanced—Activity Now Abated, Furnaces Withholding From Market.**

AN ADVANCING pig iron market caused by the coal and coke situation stimulated buying in many consuming centers during the past week, mainly at the levels recently in effect. With large tonnages booked, and good backlogs, producers have withdrawn from the market or are moving cautiously until the outlook becomes clear. Furnace interests with headquarters at Cleveland booked 50,000 tons; Buffalo producers took 20,000 tons; sales in eastern New York totaled 15,000 tons, at St. Louis and the total was 13,000 tons. Pig iron prices in the valley are 50 cents to $1 higher than a week ago; eastern Pennsylvania producers have advanced their quotations 50 cents, and the market at Cleveland and nearby lake districts is up 50 cents to $1.

PITTSBURGH, Nov. 2.—The pig iron market is in a state of flux. Numerous merchant and steel plant producers are quoting $1 more than their last week's selling prices, to offset the automatic advance in their coke costs, due to wage clauses in coke contracts. The higher pig iron prices are not yet substantiated by sales, except one sale of malleable iron by a steel interest to a local roll foundry. A few hundred tons, it is reported, brought $20, f.o.b. Pennsylvania furnace, having the same freight rate to Pittsburgh as that from the valley. Inquiries for foundry iron total about 5000 tons for first quarter. Buyers are reluctant to close at the new prices, believing the market will ease off. Sellers say this is not likely. Inquiries usually involve 1000 tons or less. One calls for 100 tons each of three grades for delivery in the first quarter. A steel foundry wants 500 tons of bessemer for December and first quarter. No interest in basic iron is manifest. Several hundred tons of foundry iron was sold last week at $19, but producers now ask $20, base. One interest sold 750 tons of bessemer to various buyers at $19.50, but now quotes $20.50, minimum.

Average sales price of bessemer and basic iron in October increased over the preceding month to $19 and $18, respectively, against $18.35 and $17.50 respectively, for September, W. P. Snyder & Co. report.

Market for low phosphorus iron is stronger. Bethlehem Steel Co. is quoting $27, furnace, with a $4.68 freight rate to Pittsburgh.

**Boston, Nov. 2.**—Evidence of the tight fuel situation in the eastern pig iron market is becoming more pronounced. New England foundrymen, apprehensive over that situation, are placing first quarter contracts in larger volume. Weak spots in the pig iron market have disappeared. The Everett, Mass., furnace is firm at $21, base. Eastern Pennsylvania furnaces have moved up to $21.50, base. Buffalo furnaces are quoting $20 on No. 2X (2.25 to 2.75 silicon) for first quarter. Recent sales include 1000 tons to a textile machinery maker.

**New York, Nov. 2.**—Sales of pig iron the past week aggregated more than 15,000 tons. One Buffalo interest booked about 10,000 tons. Thatcher Furnace Co. was the largest buyer, taking 3500 to 4000 tons for first quarter. Burnham Boiler Corp. bought 2000 tons for Lancaster, Pa., and Elizabeth, N. J. Louis Sacks Iron Foundry bought 1200 tons of malleable and foundry iron. A. P. Smith Mfg. Co. bought 800 tons of foundry for February-May, inclusive, delivery. Several other good size lots were closed privately. Buffalo foundry iron continues to sell at $19 base, Buffalo, for delivery in this territory in the first quarter and first half, but there are indications that an advance on Buffalo foundry may be expected shortly. Eastern Pennsylvania makers have advanced and their minimum now seems to be $22, base, furnace. At least three Eastern Pennsylvania makers practically are out of the market and the others are well sold up.

Eastern pig iron producers are not anxious to quote on inquiries for next year, owing to uncertainty over coke. Sales of 4000 to 5000 tons of low phosphorus iron have been made to consumers at Pittsburgh and Chicago. Offerings of foreign iron are even more restricted and foreign iron is a negligible factor. Bethlehem Steel Co. is expected shortly to blow in a furnace on copper bearing low phosphorus iron.

**Buffalo, Nov. 2.**—Prospect of price advances as a result of the fuel situation has caused a broad pig iron buying movement here and in the East. Buffalo furnaces booked close to 20,000 tons last week and buying continues brisk. Pending inquiries total 10,000 tons, including two lots of 2000 tons. Outside competition is considerably less keen and Buffalo makers are getting an increasing share of business.

**Cleveland, Nov. 2.**—Indicating the desire of pig iron melters to close for their first quarter needs before the fuel situation exerts a stronger effect on the market, one merchant furnace interest with headquarters here booked as much tonnage in the past week as it did in the first three weeks of October. Other makers had quotations outstanding, and the total of sales of furnace companies here was about 50,000 tons, the largest week's business in more than a month. Practically all offers at former prices have been taken, or withdrawn, and sellers now are standing by, waiting for the fuel market to clarify itself. In the meantime inquiries continue to pile up; on Monday one lake furnace company had a total for 35,000 tons. Included in these was an inquiry for 4000 tons of foundry iron for the first half, from a nearby melter. Prices are strengthening and it is practically assured that when leading companies here re-enter the

(*Concluded on Page* 1197)

## Pig Iron Prices

**Prices per gross ton**

| | |
|---|---|
| Bessemer, valley | $19.50 to 20.00 |
| Bessemer, Pittsburgh | 21.26 to 22.26 |
| Basic, valley | 18.50 to 19.50 |
| Basic, Pittsburgh | 20.26 to 21.26 |
| **Basic, Buffalo** | **19.00 to 19.50** |
| Basic, del., eastern Pa. | 22.00 to 23.00 |
| Malleable, valley | 19.00 to 20.00 |
| Malleable, Pittsburgh | 20.76 to 21.26 |
| Malleable, del., Cleveland | 20.00 to 20.50 |
| **Malleable, Chicago** | **21.00** |
| **Malleable, Buffalo** | **19.00 to 20.00** |
| Malleable, del., eastern Pa. | 23.00 to 24.00 |
| No. XI, Eastern del., Phila | 23.76 to 24.76 |
| **No. IX, Buffalo** | **20.50 to 21.00** |
| **No. 1 foundry, Chicago** | **21.50** |
| No. 2 foundry, valley | 19.00 to 20.00 |
| No. 2 foundry, Pittsburgh | 20.76 to 21.26 |
| **No. 2 foundry, Buffalo** | **19.00 to 20.00** |
| No. 2 foundry, Boston | 21.50 |
| **No. 2 foundry, Chicago** | **21.00** |
| No. 2 foundry, Granite City | 21.00 to 21.50 |
| No. 2 foundry, Ironton | 20.00 to 20.50 |
| No. 2 foundry, del., Cleveland | 20.00 to 20.50 |
| No. 2 foundry, del., Phila. | 22.76 to 23.26 |
| No. 2 foundry, N. J., tidewater | 23.76 to 24.26 |
| No. 2X, eastern del., Phila | 23.26 to 23.76 |
| No. 2X east N. J., tidewater | 24.26 to 24.76 |
| No. 2X, foundry, Buffalo | 20.00 to 20.50 |
| No. 2X, eastern del., Boston | 25.15 to 26.15 |
| **No. 2X, Buffalo, del., Boston** | **23.91 to 24.41** |
| Continental foundry f.o.b. Boston | 21.00 to 22.00 |
| **No. 2 Alabama, Birmingham** | **20.00** |
| No. 2 Alabama, del. Cincinnati | 23.69 |
| No. 2 Tenn., Birmingham | 20.50 |
| No. 2 Tenn., del. Cincinnati | 24.19 |
| No. 2 Alabama, del. Philadelphia | 26.01 |
| No. 2 Alabama, del. Chicago | 26.01 |
| No. 2 Alabama, del Chicago (barge and rail) | 25.18 |
| No. 2 Alabama, del. Boston (rail and water) | 26.81 |
| No. 2 Alabama, del. Cleveland | 26.01 |
| No. 2 Alabama, del. St. Louis | 24.42 |
| No. 2X, Virginia | 22.50 to 23.25 |
| No. 2X, Virginia, Phila | 27.67 to 28.42 |
| No. 2X, Virginia, del Jers. City | 28.04 to 28.79 |
| No. 2X, Virginia, del. Boston | 28.42 to 29.17 |
| Gray forge, eastern Pa. | 22.00 to 23.00 |
| Gray forge, val. del. Pitts. | 20.26 to 21.26 |
| Low phos., standard, valley | 28.00 |
| Low phos., standard, Phila. | 25.76 |
| Low phos., Lebanon | 25.00 |
| **Charcoal, Birmingham** | **29.00 to 30.00** |
| Charcoal, Superior, Chicago | 27.04 |

Silvery iron Jackson county, Ohio furnace, 5 per cent $25.50; 6 per cent $26.50; 7 per cent $27.50; 8 per cent $28.50; 9 per cent $30.00; 10 per cent $32.00; 11 per cent $34.00; 12 per cent $36.00; 13 per cent $38.00; and 14 per cent $40.00.

Bessemer ferrosilicon, Jackson county, Ohio, furnace, 10 per cent $34.00; 11 per cent $36.00; 12 per cent $38.00; 13 per cent $40.00; 14 per cent $42.00; 15 per cent $45.00; 16 per cent $47.00; 17 per cent $49.50.

*Duty paid, delivered Philadelphia consumers. Prices are f.o.b. furnace except where stated otherwise.

# Coke

**Market 50 Cents to $1 Higher —Wage Clauses Operative— Spot Furnace Fuel at $5 to $6**

BEEHIVE and by-product coke prices in the principal consuming centers this week are 50 cents to $1 higher than a week ago. Wage clauses in beehive coke contracts became operative Monday, adding approximately 85 cents a ton to the price of furnace coke, booked at $3 to $4. Furnaces not having wage clauses have arranged for them to insure supplies.

**Pittsburgh, Nov. 2.**—With wage clauses becoming effective yeterday, beehive coke contracts taken at $3 to $4 definitely reached higher levels. As various plants have different operating conditions it is difficult to estimate the average increase, but it is understood to involve about 85 cents a ton, which translated into pig iron is said to mean approximately $1. In a large way, higher coke levels for pig iron manufacture are fully operative, since the few iron producers having contracts without a wage clause now are voluntarily asking cokemakers for its inclusion to enable them to obtain labor to make and ship coke so that deliveries will not be interrupted. The Rogers Brown Iron Co. did not buy on its inquiry for 14,000 tons noted last week. It is understood it will operate its ovens at Reynoldsville. The Stewart Iron Co. accumulated coke at least from two sources last month, and will restart its furnace Dec. 1. It booked its first quarter requirements in the middle of September at $4 with a wage clause. No blast furnaces now are inquiring. A few spot sales of standard furnace coke are noted at $5 to $6. Medium and high sulphur coke is selling at $4 to $4.75. While a broker bought a carload of foundry coke at $5, other lots of selected fuel are selling at $6 to $7. That maximum was obtained today for tonnage for delivery over the remainder of the year. Coal maintains its strength, although at times weak spots develop due to backing up of tonnage at piers or to excess slack. While $3.50 was the top price paid for gas slack last week numerous sales are noted at $3.25 today, and there are offers at $3. While gas mine-run coal sold at $4.50, more now is available at $4. Some buying of by-product coking coal is noted, prices varying between $3.50 and $4, meaning at least $6 for coke. Many oven operators are curtailing coke production, concentrating on coal. Some have a regular avalanche of coal inquiries from railroads, steelworks and other industrial companies, and domestic dealers.

Production of coke in the Connellsville region for the week ended Oct. 23 was 143,550 tons, compared with 150,120 tons the preceding week, according to the *Connellsville Courier*.

**Boston, Nov. 2.**—The foundry coke situation is stronger. The price under contract remains at $12, delivered, but spot tonnage is scarce and commands premiums of 50 cents to $1. Commercial and domestic grades have been moved up 50 cents during the week.

**New York, Nov. 2.**—Sales of spot beehive coke have been made here at $7 to $7.50 Connellsville for foundry and $6 to $6.50 for furnace. By-product furnace coke has been advanced in New Jersey $1 and the market now is $10.59 to $11.77, delivered Newark and other northern New Jersey consuming points, depending on the freight.

**Cincinnati, Nov. 2.**—Domestic coke prices have been advanced an average of 50 cents a ton by Ashland By-Product Coke Co. and Portsmouth By-Product Coke Co. The Indianapolis maker has announced a similar advance. The Terre Haute producer will increase the price 35 cents a ton, Nov. 10, for shipment anywhere in Indiana, and 50 cents for delivery outside the state. By-product foundry fuel prices which are unchanged are as follows: Ashland and Portmouth 7.50, ovens and Indianapolis $10.25, delivered there. Wise county furnace fuel is generally quoted at $5; foundry at $6; New River furnace at $5.50, and foundry at $7.50 to $8, ovens.

**Chicago, Nov. 2.**—Users of by-product foundry coke are well covered on fourth quarter contracts, and are specifying at a steady rate. Little spot buying has developed. October shipments were slightly ahead of September. The price is firm at $9.75, Chicago ovens.

**St. Louis, Nov. 2.**—Demand for all grades of coke in this district continues active. Inquiries are coming in to local by-product makers from districts which have not applied to this market for many months. The leading east-side producer has withdrawn from the market, and despite capacity operations is considerably behind on deliveries.

**Detroit, Nov. 2.**—By-product foundry coke prices have been adbanced $1 to $10.50. Demand is fair, foundries buying hand-to-mouth.

## Coke Prices

| | |
|---|---|
| **Beehive, Ovens** | |
| **Prices per net ton** | |
| Connellsville furnace | $5.00 to 6.00 |
| Connellsville foundry | 6.00 to 7.00 |
| New River foundry | 7.50 to 8.00 |
| New River furnace | 5.50 |
| Wise county furnace | 5.00 |
| Wise county foundry | 6.00 |
| Alabama foundry | 4.50 to 5.50 |
| **By-Product** | |
| Foundry, Newark, N. J.; del. | 10.59 to 11.77 |
| Foundry, Chicago, ovens | 9.75 |
| Foundry, New England, del. | 13.00 |
| Foundry, St. Louis | 10.00 |
| Foundry, Granite City, Ill. | 10.00 |
| Foundry, Birmingham | 5.50 to 6.00 |
| Foundry Indianapolis, del. | 10.25 |
| Foundry, Ashland, Ky. | 7.50 |
| Foundry, Portsmouth, O. | 7.50 |

# Ferroalloys

**Market Stronger—Ferromanganese $100—Spot Spiegeleisen Advanced**

**New York, Nov. 2.**—The price on new business in ferromanganese now is $100, duty paid, tidewater. Sales of a number of carloads have been made at this figure. This price applies only to material to be consumed in 1926. The makers have issued no quotations on requirements beyond the end of this year. The price of spot spiegeleisen has been advanced $1 and the 19 to 21 per cent grade now is quoted $35, furnace. A number of carloads have been sold at the new price. A number of inquiries have been put out by consumers for first half. The producers have not made any quotations in view of uncertainties in the coke market. The advance in the price of spot spielegeisen is due to the higher prices of coke.

Prices all through the list of special alloys are unchanged, and so is tungsten ore, generally quoted at $10.65 to $10.75 a unit. A good business was done in this ore a short time ago but it is quiet again. Supplies from China are more uncertain.

**Pittsburgh, Nov. 2.**—Inquiries for ferroalloys are withheld and the market is quiet. Domestic producers of ferromanganese last week increased their price for the remainder of this year to $100. Nothing is said about first quartter prices, and the only inquiries at hand for that period are tentative ones, no tonnage being indicated. A few single carload sales of spiegeleisen are noted in the 16 to 19 per cent grade at $33, furnace.

## Ferroalloy Prices

| | |
|---|---|
| †Ferromanganese 78 to 82 per cent, tidewater, or furnace first hand resales | $100.00 |
| Ferromanganese delivered Pittsburgh | 104.79 |
| Spiegeleisen 19 to 21 per cent domestic furnace or tidewater.. | 35.00 |
| Ferrosilicon, 50 per cent freight allowed | 85.00 to 87.50 |
| Ferrotungsten standard, per pound contained | 1.00 to 1.08 |
| Ferrochrome, 60 to 70 chromium, 6 to 8 carbon, cents per pound contained, delivered | 11.00 to 11.50 |
| Ferrovanadium, 30 to 40 per cent per pound estimated, according to analysis | 3.25 to 4.00 |
| Ferro-carbon-titanium, car lots, producer's plant, net ton | 200.00 |
| Ferrophosphorus, per ton, carload, 17 to 19 per cent, Rockdale, Tenn., basis (18 per cent material) | 91.00 |
| Ferrophosphorus, electrolytic, per ton, carload, 23 to 25 per cent, f.o.b. Anniston, Ala., (24 per cent materials) | 122.50 |

†Duty paid.

# Plates

**Market Is Quieter—Prices Steady—Oil Tank Specifications Drop**

LARGE tonnage demand for plates is lacking, and the market is quieter than in recent weeks. Sales and specifications for oil tanks have shrunk. Miscellaneous inquiries at Chicago call for 15,000 to 20,000 tons. Two lake boats on which bids were taken recently still are pending. New bridge work promises to develop a fair demand. Prices are steady.

PLATE PRICES, PAGE 1182

**Pittsburgh, Nov. 2.**—Tank plates are quiet so far as new business is concerned. Inquiries are out for additional tanks for the Seminole oil field in Oklahoma, and the Barnsdall Oil Corp., Okmulgee, Okla., probably will purchase additional storage. A large quantity of storage still is to be bought for the Panhandle, Tex., field. Plate orders for car shops have been slightly more numerous. Other plate users are not buying heavily, but there appears to be no interference with the 1.90c price as to Pittsburgh district makers.

**Boston, Nov. 2.**—Plate buying volume equals mill production and the price holds firm at 1.90c, Pittsburgh.

**Cleveland, Nov. 2.**—Shipments of plates into this district in October were practically on a parity with September but bookings averaged 8 to 10 per cent under September. The two Great Lakes freighters requiring 5000 tons of plates each still are pending. A fair tonnage of plates will be required for railroad bridge work. Consumption of plates has not reflected the caution exhibited in buying. Plates are holding at 1.90c, Pittsburgh, or 2.09c, delivered, Cleveland.

**Chicago, Nov. 2.**—Users of sheared and universal plates are working off tonnages on hand. Effects of paring inventories are reflected in diminishing specifications. Sales and specifications from oil tank builders dropped sharply from a week ago, the tonnage less than 5000. Car building gives no promise of demand before January. Inquiry for early shipment of plates now totals 15,000 to 20,000 tons. Easing off of specifications apparently has had no effect on the price, unchanged at 2.10c, Chicago.

## CONTRACTS PLACED

1200 tons, pipe line Washington Water Power Co., Spokane, to Puget Sound Machinery depot.

500 tons, surge tanks for Washington Water Power Co., Spokane, to Chicago Bridge & Iron Works.

325 tons, 10, 16 and 18-inch riveted pipe for La Mesa, Lemon Grove and Spring Valley irrigation district, La Mesa, Calif., to Lacy Mfg. Co.

280 tons, oil field tanks for Indian Territory Ill. Oil Co., Bartlesville, Okla., to Kaw Steel Construction Co.

## CONTRACTS PENDING

3500 tons, plates for the Interlake Steamship Co. vessel for which contract has been awarded American Shipbuilding Co., Lorain, O., yards. Steel expected to be awarded Bethlehem Steel Co. and Youngstown Sheet & Tube Co.

Tonnage unstated, tanks for the Barnsdall Oil Corp., Okmulgee, Okla., bids about to be asked.

Tonnage unstated, additional tanks for the Panhandle, Tex., field; bids about to be asked.

## Britain Entertains Steel Treater Secretary

London, Oct. 25.—W. H. Eisenman, national secretary, American Society for Steel Treating, was most favorably impressed by his first contact with representatives of the British steel industry in London. On Oct. 18, the day of his arrival, an informal dinner was held at the Hotel Metropole. The principal guests, representing the steel industry and technical association, showed lively interest in and appreciation of the activities and progress of the American Society for Steel Treating.

On Oct. 20, Mr. Eisenman spent the day in Sheffield. He was the guest at breakfast of W. J. Dawson, director of Hadfields, Ltd., F. C. Fairholme, managing director and Dr. Hatfield, consulting metallurgist of Thomas Firth & Sons, Ltd., Professor Desch of the University of Sheffield, F. C. A. H. Lantsberry, managing director of William Jessop & Sons, Ltd., and representative members of other large firms. In the morning Mr. Eisenman visited the University of Sheffield with Professor Desch. He then visited the plant and laboratory of Hadfields, Ltd., where he was entertained at lunch by P. B. Brown and Major A. B. H. Clerke, joint managing directors.

After lunch Mr. Eisenman visited the plant of William Jessop & Sons, Ltd., and the plant and laboratory of Thomas Firth & Sons, Ltd. He was particularly impressed by the efficiency of the organization of the research department of these works.

# Semifinished

**Billet and Slab Specifications Picking Up—New Sales Small—Prices Steady**

SPECIFICATIONS for billets and slabs that dropped in tonnage slightly toward the close of October are picking up, while those for sheet bars continue in fair volume. Individual purchases are small as many consumers buy from hand to mouth. Users of forging billets are specifying freely. Prices are steady; makers generally are not quoting for first quarter.

SEMIFINISHED STEEL PRICES, PAGE 1182

**Pittsburgh, Nov. 2.**—While individual purchases of semifinished steel do not involve much tonnage, the aggregate for a month is fairly high. Practically all buyers of billets and slabs are purchasing on a month-to-month basis, or within closer limits. During the latter part of October specifications fell off somewhat, but indications are that they will be made up. Sheet and tin bar specifications have held up well. While nothing has been said with reference to first quarter prices, the general opinion is that $35 will prevail on 4 x 4-inch rerolling billets, and $36 on sheet bars. The movement of wire rods on $45 contracts is fairly steady. Skelp activity is limited to specifications against contracts, and the open market figure appears to be firm at 1.90c. Forging billets users are not ready as yet to proceed with first quarter arrangements, but are specifying freely against their fourth quarter commitments at $40.

**Philadelphia, Nov. 2.**—Buying of billets in this territory continues hand-to-mouth, comprising a fair tonnage. The market is firm at $35, base, Pittsburgh, for open-hearth rerolling billets, with an extra of $5 for forging billets. There are numerous variations from these prices; for instance, some consumers who do their own chipping are allowed a deduction. Special prices appear in connection with off-heats. The wire rod price is firm at $45, base, Pittsburgh. Few users are under contract for fourth quarter.

**Cleveland, Nov. 2.**—Specifications for semifinished steel that were held up recently due to the slackening operations in the automotive industry are being released, and the volume coming to a local mill from that source is reported fairly good. New orders from other users continue to come out in moderate proportions. The market is quotable at $36, Cleveland or Youngstown, for sheet bars, and $35 for billets and slabs. Demand for first quarter has not developed sufficiently to warrant quotations.

**Chicago, Nov. 2.**—The price $35, base, Chicago, is firm for billets, which are in fair demand. Sheet bar market is not active but the price is firm at $36.

# Iron and Steel Scrap Prices

**Corrected to Tuesday noon. Gross Tons Delivered to Consumer**

## Steel Works Scrap

### HEAVY MELTING STEEL

| | |
|---|---|
| Birmingham | 13.00 to 14.00 |
| Boston (dealers) | 11.00 to 11.50 |
| Buffalo, No. 1 | 17.25 to 17.75 |
| Buffalo, No. 2 | 16.00 to 16.50 |
| Chicago | 13.00 to 13.50 |
| Cincinnati (dealers) | 13.00 to 13.50 |
| Cleveland, No. 1 | 15.00 to 15.50 |
| Cleveland, No. 2 | 14.00 to 14.50 |
| Detroit | 12.00 to 12.50 |
| Eastern Pennsylvania | 16.00 to 16.50 |
| Bethlehem delivery | 15.50 to 16.00 |
| New York (dealers) (yard) | 10.00 to 10.50 |
| Pittsburgh No. 1 | 17.50 to 18.00 |
| Pittsburgh No. 2 | 16.50 to 17.00 |
| St. Louis | 13.00 to 13.50 |
| Valleys, No. 1 | 16.00 to 16.50 |

### COMPRESSED SHEETS

| | |
|---|---|
| Buffalo | 14.75 to 15.25 |
| Chicago | 11.50 to 12.00 |
| Cleveland | 13.00 to 14.00 |
| Detroit | 10.25 to 10.75 |
| Pittsburgh | 15.50 to 16.00 |
| Valleys | 15.00 to 15.50 |

### BUNDLED SHEETS

| | |
|---|---|
| Buffalo | 11.00 to 11.50 |
| Cincinnati (dealers) | 9.50 to 10.00 |
| Cleveland | 12.50 to 13.00 |
| Eastern Pennsylvania | 13.00 to 13.50 |
| Pittsburgh | 14.50 to 15.00 |
| St. Louis | 8.00 to 8.50 |

### SHEET CLIPPINGS, LOOSE

| | |
|---|---|
| Chicago | 8.25 to 8.75 |
| Cincinnati | 6.50 to 7.00 |
| Detroit | 6.25 to 6.75 |
| St. Louis | 7.00 to 7.50 |

### STEEL RAILS, SHORT

| | |
|---|---|
| Birmingham | 13.00 to 14.00 |
| Buffalo | 17.25 to 17.75 |
| Chicago | 16.75 to 17.00 |
| Cincinnati (dealers) | 17.50 to 18.00 |
| Cleveland (over 6 ft.) | 14.75 to 15.00 |
| Detroit | 15.00 to 15.50 |
| St. Louis | 16.50 to 17.00 |

### STOVE PLATE

| | |
|---|---|
| Birmingham | 14.00 to 14.50 |
| Boston (consumers) | 13.50 to 14.00 |
| Buffalo | 15.00 to 15.50 |
| Chicago (net) | 14.00 to 14.50 |
| Cincinnati (dealers) (net) | 9.00 to 9.50 |
| Cleveland | 13.00 to 13.50 |
| Detroit (net tons) | 12.00 to 12.50 |
| Eastern Pennsylvania | 13.50 |
| New York (dealers) | 10.00 to 11.25 |
| Pittsburgh | 13.00 to 13.50 |
| St. Louis | 14.75 to 15.25 |

### LOW PHOSPHORUS

| | |
|---|---|
| Buffalo, billet and bloom crops | 18.50 to 19.00 |
| Cincinnati (dealers) | 16.50 to 17.00 |
| Eastern Pennsylvania | 20.00 to 21.00 |
| Pitts. billet and bloom crops | 20.50 to 21.50 |
| Cleveland, billet and bloom crops | 19.00 to 19.50 |

### SHOVELING STEEL

| | |
|---|---|
| Chicago | 13.00 to 13.25 |
| Pittsburgh | 12.50 to 13.00 |
| St. Louis | 13.00 to 13.50 |

### KNUCKLES, COUPLERS, SPRINGS

| | |
|---|---|
| Chicago | 15.50 to 16.00 |
| Eastern Pennsylvania | 17.00 to 18.00 |
| Pittsburgh | 18.50 to 19.00 |
| St. Louis | 14.00 to 14.50 |

### FROGS, SWITCHES, GUARDS

| | |
|---|---|
| Chicago | 15.00 to 15.50 |
| Eastern Pennsylvania | 12.00 to 12.50 |
| St. Louis | 14.00 to 14.50 |

### ANGLE BARS—STEEL

| | |
|---|---|
| Buffalo | 16.50 to 17.00 |
| Chicago | 15.00 to 15.50 |
| St. Louis | 14.00 to 14.50 |

## Iron Mill Scrap

### RAILROAD WROUGHT

| | |
|---|---|
| Birmingham | 11.00 to 12.00 |
| Boston (dealers) | 11.50 to 12.00 |
| Buffalo, No. 1 | 13.50 to 14.00 |
| Buffalo, No. 2 | 15.50 to 16.00 |
| Chicago, No. 1 | 14.00 to 14.25 |
| Chicago, No. 2 | 13.00 to 13.50 |
| Cincinnati, No. 1 (dealers) | 11.50 to 12.00 |
| Cleveland, No. 1 | 12.50 to 13.00 |
| Eastern Pennsylvania | 17.00 to 17.50 |
| New York, No. 1 (dealers) | 14.50 to 15.00 |
| Pittsburgh, No. 1 | 13.50 to 14.00 |
| Pittsburgh, No. 2 | 17.00 to 17.50 |
| St. Louis, No. 1 | 13.00 to 13.50 |
| St. Louis, No. 2 | 13.00 to 13.50 |

### WROUGHT PIPE

| | |
|---|---|
| Boston (dealers) | 9.50 to 10.00 |
| Eastern Pennsylvania | 14.00 to 14.50 |
| Buffalo | 15.00 to 15.50 |
| New York (dealers) | 9.25 to 9.75 |

### YARD WROUGHT

| | |
|---|---|
| Boston | 12.00 to 12.50 |
| Eastern Pennsylvania | 13.50 to 14.50 |

### BUSHELING

| | |
|---|---|
| Buffalo | 16.00 to 16.50 |
| Chicago, No. 1 | 11.50 to 12.00 |
| Chicago, No. 2 | 8.50 to 9.00 |
| Cincinnati, No. 1 (dealers) | 8.00 to 8.50 |
| Cleveland No. 1 | 11.75 to 12.00 |
| Cleveland, No. 2 | 11.50 to 11.75 |
| Pittsburgh, No. 1 | 14.50 to 15.00 |
| St. Louis, No. 1 | 11.50 to 12.00 |

### MACHINE SHOP TURNINGS

| | |
|---|---|
| Birmingham | 8.00 to 8.50 |
| Boston | 8.00 to 8.50 |
| Buffalo | 10.75 to 11.25 |
| Chicago | 7.50 to 8.00 |
| Cincinnati (dealers) | 6.00 to 6.50 |
| Cleveland | 11.00 to 11.50 |
| Detroit | 8.25 to 8.75 |
| Eastern Pennsylvania | 13.00 to 13.50 |
| New York (dealers) | 9.25 to 9.75 |
| Pittsburgh | 12.00 to 12.50 |
| St. Louis | 7.00 to 7.50 |

### CAST IRON BORINGS

| | |
|---|---|
| Birmingham (chemical) | 15.50 to 16.50 |
| Birmingham (plain) | 8.00 to 8.50 |
| Boston (chemical) | 10.50 to 11.00 |
| Boston (dealers) | 8.50 to 9.00 |
| Buffalo | 12.00 to 12.50 |
| Chicago | 9.00 to 9.50 |
| Cincinnati (dealers) | 6.50 to 7.00 |
| Cleveland | 11.75 to 12.00 |
| Detroit | 9.00 to 9.50 |
| Eastern Pennsylvania | 13.00 to 13.50 |
| Eastern Pennsylvania (chem.) | 15.50 to 16.50 |
| New York (dealers) | 9.25 to 9.75 |
| Pittsburgh | 12.50 to 13.00 |
| St. Louis | 10.50 to 11.00 |
| Valleys | 13.50 |

### MIXED BORINGS AND TURNINGS

**For blast furnace use**

| | |
|---|---|
| Boston (dealers) | 8.00 to 8.50 |
| Buffalo | 12.00 to 12.50 |
| Cincinnati (dealers) | 6.00 to 6.50 |
| Cleveland | 11.75 to 12.00 |
| Detroit | 8.50 to 9.00 |
| Eastern Pennsylvania | 12.00 to 13.00 |
| New York (dealers) | 9.25 to 9.75 |
| Pittsburgh | 12.50 to 13.00 |

### PIPES AND FLUES

| | |
|---|---|
| Chicago (net) | 9.50 to 10.00 |
| Cincinnati (dealers) | 8.00 to 8.50 |
| St. Louis | 10.00 to 10.50 |

### RAILROAD GRATE BARS

| | |
|---|---|
| Buffalo | 13.00 to 13.50 |
| Chicago (net) | 13.25 to 13.75 |
| Cleveland | 13.50 to 13.75 |
| Eastern Pennsylvania | 13.50 |
| New York (dealers) | 11.25 to 12.00 |
| St. Louis | 15.00 to 15.50 |

### FORGE FLASHINGS

| | |
|---|---|
| Boston (dealers) | 8.50 to 9.00 |
| Buffalo | 14.00 to 14.50 |
| Chicago | 9.25 to 9.75 |
| Cleveland (over 10 in.) | 12.50 to 13.00 |
| Cleveland (under 10 in.) | 12.50 to 13.00 |
| Detroit | 8.25 to 8.75 |
| Pittsburgh | 13.00 to 13.50 |

### FORGE SCRAP

| | |
|---|---|
| Boston (dealers) | 8.50 to 9.00 |
| Chicago | 17.00 to 17.50 |
| Eastern Pennsylvania | 13.50 to 14.00 |

### ARCH BARS AND TRANSOMS

| | |
|---|---|
| Chicago (net) | 19.25 to 19.50 |
| St. Louis | 20.50 to 21.00 |

## Iron Steel Works Scrap

### AXLE TURNINGS

| | |
|---|---|
| Boston (dealers) | 9.50 to 10.00 |
| Buffalo | 13.50 to 14.00 |
| Chicago | 13.25 to 13.75 |
| Cleveland | 12.50 to 13.00 |
| Eastern Pennsylvania | 14.00 to 14.50 |
| Pittsburgh | 15.00 to 15.50 |
| St. Louis | 10.50 to 11.00 |

### STEEL CAR AXLES

| | |
|---|---|
| Birmingham | 17.00 to 18.00 |
| Boston (shipping point) | 18.00 to 18.50 |
| Buffalo | 16.50 to 17.00 |
| Chicago | 18.50 to 19.00 |
| Cleveland | 16.00 to 16.50 |
| Eastern Pennsylvania | 22.00 to 23.00 |
| Pittsburgh | 21.00 to 22.00 |
| St. Louis | 20.00 to 20.50 |

### SHAFTING

| | |
|---|---|
| Boston (shipping point) | 16.00 to 17.00 |
| Chicago | 19.75 to 20.00 |
| Eastern Pennsylvania | 21.00 to 22.00 |
| New York (dealers) | 17.50 to 18.00 |
| St. Louis | 18.00 to 18.50 |

## Iron Foundry Scrap

### CAR WHEELS

| | |
|---|---|
| Birmingham, iron | $16.00 to 16.50 |
| Boston (consumers) | 17.00 to 17.50 |
| Buffalo, iron | 16.50 to 17.00 |
| Buffalo, steel | 17.00 to 17.50 |
| Chicago, iron | 14.25 to 14.75 |
| Chicago, steel | 16.25 to 16.75 |
| Cincinnati | 12.00 to 12.50 |
| Eastern Pennsylvania | 17.00 to 17.50 |
| New York iron (dealers) | 12.50 to 13.50 |
| Pittsburgh, iron | 16.00 to 16.50 |
| Pittsburgh, steel | 18.50 to 19.00 |
| St. Louis, iron | 15.25 to 15.75 |
| St. Louis, steel | 17.00 to 17.50 |

### NO. 1 CAST SCRAP

| | |
|---|---|
| Birmingham, cupola | 16.00 to 17.00 |
| Boston | 18.00 to 18.50 |
| Buffalo | 16.00 to 16.25 |
| Chicago, No. 1 machinery | 18.25 to 19.00 |
| Chicago, No. 1 railroad or agricultural | 17.50 to 18.00 |
| Cincinnati No. 1 machinery cupola (net tons dealers) | 17.50 to 18.00 |
| Cleveland, cupola | 16.75 to 17.25 |
| Detroit (net tons | 14.25 to 14.75 |
| Eastern Pennsylvania, cupola | 17.50 to 18.00 |
| New York, cupola (dealers) | 14.50 to 15.00 |
| Pittsburgh, cupola | 16.00 to 16.50 |
| San Francisco, delivered | 20.00 to 21.00 |
| Seattle | 17.00 |
| St. Louis, railroad | 16.50 to 17.00 |
| St. Louis, agricultural | 16.50 to 17.00 |
| St. Louis, machinery | 19.00 to 19.50 |
| Valleys | 17.50 |

### HEAVY CAST

| | |
|---|---|
| Boston | 15.50 to 16.50 |
| Buffalo (breakable) | 13.25 to 13.75 |
| Cleveland | 13.00 to 13.25 |
| Detroit (automobile) (net tons) | 19.00 to 20.00 |
| Eastern Pennsylvania | 16.00 to 16.50 |
| New York (dealers) | 12.75 to 14.00 |
| Pittsburgh | 15.00 to 15.50 |

### MALLEABLE

| | |
|---|---|
| Boston, railroad | 19.50 to 20.00 |
| Buffalo | 17.50 to 18.00 |
| Chicago, agricultural | 15.25 to 15.75 |
| Chicago, railroad | 16.25 to 16.75 |
| Cincinnati, railroad (dealers) | 14.50 to 15.00 |
| Cincinnati, agricultural (dealers) | 14.50 to 15.00 |
| Cleveland, agricultural | 17.50 to 18.00 |
| Cleveland, railroad | 18.50 to 19.00 |
| Detroit | 14.00 to 14.50 |
| Eastern Pennsylvania, railroad | 14.00 to 15.00 |
| Pittsburgh, railroad | 17.00 to 17.50 |
| St. Louis, agricultural | 13.00 to 13.50 |
| St. Louis, railroad | 13.75 to 14.25 |

## Miscellaneous Scrap

### RAILS FOR ROLLING

**5 feet and over**

| | |
|---|---|
| Birmingham | 14.00 to 15.00 |
| Boston (dealers) | 11.50 to 12.00 |
| Buffalo | 17.25 to 17.75 |
| Chicago | 16.50 to 17.00 |
| Cleveland | 16.00 to 16.25 |
| Eastern Pennsylvania | 17.00 to 17.50 |
| New York | 13.75 to 14.25 |
| Pittsburgh district | 18.50 to 19.50 |
| St. Louis | 15.25 to 15.75 |

### LOCOMOTIVE TIRES

| | |
|---|---|
| Chicago, No. 1 | 17.75 to 18.00 |
| Chicago, cut | 17.50 to 18.00 |
| St. Louis, No. 1. | 16.00 to 16.50 |

### LOW PHOSPHORUS PUNCHINGS

| | |
|---|---|
| Chicago | 15.50 to 16.00 |
| Eastern Pennsylvania | 17.50 to 18.50 |
| Pittsburgh | 18.00 to 19.00 |

# Scrap

**Market Dull and Lower with Prices Uncertain—Supply Is Large**

AS A whole little interest is displayed in iron and steel scrap, though a little activity is seen at isolated points. Prices have changed little and lack of consumer interest makes them nominal. Railroad offerings are heavy and depress the situation. Recent buying of heavy melting steel has removed some large consumers from the market.

**Chicago, Nov. 2.**—Dealers are showing little interest in current railroad offerings of iron and steel scrap. Only nominal prices were bid on the Chicago & North Western list yesterday, and on the Burlington list several days ago miscellaneous rails were sold at $15.10, tracks, while railroad malleable closed at $14.60 a net ton. Angle bars were closed at $13.40, tracks. Heavy melting steel in the latter offering went to Peoria. Steel mills here are doing light buying, the first consumer interest in weeks. A few foundries are filling light requirements. Dealers are showing a disposition to await the outcome of the tightening coal and coke market. Short selling is at a premium. Opinion is that scrap supplies in the district are heavy.

**Boston, Nov. 2.**—Ralling prices in iron and steel scrap give encouragement to a listless market. Dealers have bought steel scrap at Boston at $12 for shipment to Pennsylvania. Machine shop turnings are in better demand at $9 shipping point.

**New York, Nov. 2.**—Slightly lower prices on yard steel represent the only important change in iron and steel scrap. This follows a reduction of 50 cents in the price for Pottsville, Pa., the consumer closing at $14, delivered. Dealers' buying prices on this grade may now be quoted at $9.50 to $10.50, New York. Cast and wrought scrap is moving so slowly that prices are little more than nominal.

**Cleveland, Nov. 2.**—Large steel users are refusing shipments and there is no buying except by dealers to apply on orders. As a result the situation is quiet and prices are not well defined.

**Buffalo, Nov. 2.**—Dealers are giving the scrap market most of its activity here. No new tonnage buying of heavy melting steel is in prospect but dealers are in the market for material for early shipment. Prices are unchanged and nominal except as established by trades between dealers.

**Pittsburgh, Nov. 2.**—As usual at the time the railroads close bids on their scrap lists, the scrap market is quiet. The Pittsburgh & Lake Erie railroad list came out yesterday offering about 80 carloads, including 42 carloads of heavy melting steel. The Pennsylvania railroad list closes tomorrow, calling for bids on 41,605 tons of assorted grades. No consumer purchases have been noted in the past few days and the recent report that on a certain yard tonnage proposition at Butler, Pa., buyers paid $17 for heavy melting steel, appears erroneous. Sellers claim they will not sell the better grade of heavy melting steel at less than $17.50 and some want $18.

**Philadelphia, Nov. 2.**—Scrap is quiet and slightly easier with principal buying by dealers against recent orders.

**Detroit, Nov. 2.**—Iron and steel scrap remains unchanged. No improvement is to be noted. New business is at a minimum and dealers are unable to obtain permission to ship. Rejections continue. Prices continue weak and unsteady. A drop of 50 cents to $1 a ton has been made in some grades.

**Cincinnati, Nov. 2.**—Iron and steel scrap is without interest, because trading is light and consumers refuse to interest themselves in offerings. The situation generally from the standpoint of the dealer is weak, because in the face of the meager buying movement, railroads and other producers are beginning to offer large tonnages for disposal.

**St. Louis, Nov. 2.**—Weakness in iron and steel scrap has been further emphasized by continued liberal marketing of material by railroads. Lists before the trade totaled approximately 60,000 tons.

Consumers are still holding aloof, purchases being confined to small tonnages. Some mills are willing to purchase for investment, but only material obtainable at sacrifice prices. Dealers are buying only to cover orders, and the volume of their orders is the smallest in many months.

**Birmingham, Ala., Nov. 2.**—Iron and steel scrap is showing activity with little change in quotation. Heavy melting steel is held at $13 to $14 with much moving. Little railroad wrought is sold in the home territory.

# Sheets

**Market Is Less Active, But Prices Are Steady—Some Mills Reducing Schedules**

WHILE the undertone of the sheet market is strong, due to the fuel outlook, demand is not so active as in recent weeks, and some users are reducing or holding up specifications. Purchasing of autobody stock has subsided. Some of the sheet mills in the Mahoning valley this week are running on shortened schedules. Demand for electrical sheets steady.

SHEET PRICES, PAGE 1182

**Youngstown, Nov. 2.**—Sheet buyers are holding back from the market, some holding up specifications with local mills, certain mills are running this week on a shortened schedule. Shipments with other mills are fair, but general inquiry for all grades of sheets before valley makers is not promising at the moment. Some of the holdup instructions come from the Detroit district. Quotations have not changed. An undertone of new strength appears in the market in view of the stiffening coal and coke quotations and the advancing pig iron markets. Mills continue to quote 3.10c for black, 3.95c for galvanized, 2.40c for blue annealed and 4.25c for autobody stock. While there had been some talk of a 3.00c price on black sheets, that seems to have disappeared in the valley in face of the higher fuel prices. Mills are not seeking to sell sheets at this time, being involved in the general market uncertainty due to the fuel situation.

**Boston, Nov. 2.**—Blue annealed sheets are firmer but galvanized prices continue irregular. Leading sellers are attempting to hold to 3.95c for galvanized. Sales at 3.85c are frequent, and shading of this level is rumored. Demand is fair.

**Philadelphia, Nov. 2.**—Sheet specifications are slower in developing, the principal recession being noted in the automobile industry. Other consumers are taking liberal tonnage. A number of contracts for fourth quarter were booked in the past week at the new prices. Former prices practically have disappeared, due to the fuel situation.

**Pittsburgh, Nov. 2.**—According to individual sheet manufacturers, sales in October are going to present some surprisingly high totals when compilations are completed. While automobile sheet consumption fell off somewhat, other grades held up well, even beyond expectations in view of heavy bookings just prior to the price advance late in September. Agricultural implement makers are rounding out one of their best years, and this is reflected in their sheet purchases the past few weeks. Additional orders came through from electrical sheet users, and various consumers of galvanized sheets in miscellaneous lines have furnished good orders at the higher prices. American

Sheet & Tin Plate Co. still operates 90 per cent of its sheet mills but the independent average is somewhat below that, nearer the 80 per cent mark.

**Chicago, Nov. 2.**—Sheet mill operations are at capacity, and assurances are given for full operation throughout November and December. Spot buyers are given little opportunity to place business in the next 30 to 60 days. On lighter gages of black and galvanized deliveries are extended as far as 10 to 12 weeks, while heavier gage blue annealed sheets are being booked for shipment in four to five weeks. Demand for sheets is widely diversified. While spot sales at the close of October receded slightly, specifications show no weakness. It is estimated specifications the past week exceeded shipments by 15 to 25 per cent.

**St. Louis, Nov. 2.**—A further slight slowing down in purchasing of sheets is reported by producers and distributors in this district. This is particularly noticeable in the South. General manufacturing demand in St. Louis is less active than heretofore, but some special lines are taking large tonnages, and have increased their commitments. Prices are steady.

**Cleveland, Nov. 2.**—Sheet steel buying continues to show decline. One large independent makers claims business in this territory during September and October was the best in many years. Operations continue high, some mills cutting into backlogs. Black sheet quotations are fairly firm at 3.10c except where small mills continue to cut down to 3.00c to take tonnage. Galvanized sheets are steady at 3.85c to 3.95c with the minimum a common figure. Blue annealed also has settled to 2.30c although larger makers continue to name 2.40c. Autobody is steady at 4.25c.

## Tin Plate

**Export and Domestic Demands Increase—Corporation Active**

TIN PLATE PRICES, PAGE 1182

**Pittsburgh, Nov. 2.**—Due to additional export tin plate business and domestic trade, manufacturers are assured of good operating schedules through the remainder of the year and well into next quarter. Books are not open for 1927, but it will be possible to anticipate certain standardized requirements. When the American Sheet & Tin Plate Co. starts up its La Belle plant, after an idleness of about 36 months, it will increase its tin mill operating average from 92.5 per cent where it stands at present, to 96 per cent. Should increased power become available at another plant where four tin mills are idle, the schedule will be increased to 97.5 per cent. Independents are estimated to be averaging between 85 and 90 per cent. Much of the foreign business being placed in this country is directly traceable to the continuation of the British coal strike.

## J. & L. Makes Report

Earnings, after taxes of the Jones & Laughlin Steel Corp. amounted to $5,856,883 in the third quarter of 1926. The surplus for the period after depreciation, interest and dividends amounted to $2,542,190. In the nine months ended Sept. 30 the company's net was $16,282,351 the surplus for the period was $6,903,484. The company has not heretofore issued quarterly statements.

## Hamilton Stewart Dies

Pittsburgh, Nov. 2.—Hamilton Stewart, vice president and director of the Harbison-Walker Refractories Co., a director of the Koppers Co. and the Crucible Steel Co. of America, died early today at Pittsburgh following an illness of many months. He was born in Allegheny county Dec. 13, 1868, and joined the refractories company in 1889 as a clerk.

## Ore Imports Predominate

Philadelphia, Nov. 2.—Ore shipments predominated in iron and steel imports in the week ending Oct. 30. Algeria sent 6000 tons of iron ore, and Portugese East Africa 4300 tons of chrome ore. Imports of pig iron included 1500 tons from Germany, 500 from France and 100 from the Netherlands. Belgium sent 511 tons of structural steel; Poland 110 tons of iron sheets and England 10 tons of galvanized steel strips.

The machine-made horseshoe was patented by Henry Burden, Troy, N. Y., in 1835.

## Pipe

**Line Pipe Business Less Plentiful But Mill Operations Continue High**

OPERATIONS by tubular mills continue high, although new business is being exceeded by shipments in some cases. Line pipe business is lacking in present buying. Jobbers of merchant pipe have good stocks. Cast iron pipe activity is variable, with few large inquiries out excepting for municipal demand in New York. Steel pipe prices continue firm.

PIPE PRICES, PAGE 1182 AND 1226

**Pittsburgh, Nov. 2.**—Miscellaneous orders for pipe still are fairly numerous, although smaller in some cases. Jobbers of standard full weight merchant pipe have good stocks. Makers are in better shape for making deliveries. Deliveries on lapwelded steel pipe still are deferred as much as six or eight weeks, but in buttweld sizes shipments can be had more promptly. Mills generally have good backlogs of line pipe business, these large tonnage propositions having been well distributed over recent weeks. Barnsdall Corp. has started to construct its 50-mile line of 6-inch pipe from the Seminole field to its Okmulgee, Okla., refinery, and additional pipe orders are expected from it as well as other operators in that section and in the Panhandle, Tex., field.

Seamless tubes, while suffering some setback from a let-up in automotive demand, are moving well to other consuming lines. Locomotive tube orders are numerous; prices still evidence much competition.

Wrought iron pipe demand is well sustained and deliveries are obtainable usually within two weeks. Prices are unchanged.

**Boston, Nov. 2.**—Demand for cast iron pipe continues strong in the East. Public utilities are coming into the market for 1927 tonnage. Prices remain firm on small sizes.

**New York, Nov. 2.**—Pending the outcome of elections, municipal demand for cast pipe has been slack. Among the few inquiries of importance are 1000 tons of cast pipe, 20 inches and under, and 17,000 feet of 30-inch steel pipe, all for installation in the Queens. The water department will buy through a general contractor. Prices on cast pipe are unchanged.

**Chicago, Nov. 2.**—Cast iron pipe makers find their order books and rate of shipments better than last year. Shipments are close to the melt, and plant yards are free from accumulation of stock. Deliveries on the larger sizes are 45 to 60 days off, but shipments on the smaller sizes can be made more promptly than a week ago. Unfilled orders are declining slowly, although some business in this territory still is in prospect before cold weather. Most smaller business is going at $40 to $40.50, base, Birmingham, but the range quoted still is $39 to $41, Birmingham.

**Birmingham, Ala., Nov. 2.**—New lettings continue slow but unfilled tonnage is sufficient in this territory for pressure pipe shops to maintain capacity operations. Soil pipe make still is slow, a few shops operating full but the average is four days a week. Quotations on 6-inch and over pipe hold at $39.

### CONTRACTS PLACED

285 tons, 2-inch, Los Angeles, Spec. P. A. Adv. W-668, to American Cast Iron Pipe Co.
250 tons, 6-inch pipe for Harvey, Ill., to National Cast Iron Pipe Co.
105 tons, 2-inch, Los Angeles, Spec. P. A. Adv. W-668, to Crane Co.
100 tons, 6 and 8-inch for Attleboro, Mass., to Warren Foundry & Machine Co.

# The Market Section

## CONTRACTS PENDING

1000 tons, cast pipe, 20 inches and under, and 17,000 feet of 30-inch steel pipe for the water department, New York; general contractors' bids close Nov. 9.
1000 tons, 6-8 and 10-inch pipe, Greensburg, N. Y.; general contractors' bids closed Nov. 1.
900 tons, 6 to 14-inch for Toledo, O.; bids in.
335 tons, Wenatchee, Wash.; Bids received.
308 tons, 4 and 6-inch class B pipe, Bolinas, Calif.; went steel pipe.
300 tons, 6 to 10-inch pipe for Portsmouth, O.; bids in.
309 tons, 4 to 12-inch class B pipe, Shelton, Wash.; bids in Nov. 4.
250 tons, small sizes, Lynn, Mass.; bids in Nov. 9.
200 tons, 6-inch for Providence, R. I.; bids in Nov. 8.
142 tons, 4 and 6-inch class B pipe, Ventura county, Calif., water district No. 1; bids in Nov. 3.
108 tons, 4 and 6-inch class B pipe for Rolando improvement Unit No. 2, San Diego, Calif.; bids in Nov. 8.

## Car Surplus Smaller

Washington, Nov. 2.—Class one railroads on Oct. 15 had 86,932 surplus freight cars in good repair and immediately available for service, according to the American Railway association. This was a decrease of 13,137 cars compared with Oct. 8, at which time there were 100,069. Surplus coal cars in good repair Oct. 15 totaled 16,453, a decrease of 3741 within a week, while surplus box cars totaled 48,295, a decrease of 7072 cars during the same period.

## Iron Ore

### New York Producer Sells 200,000 Tons—Lake Shipments Heavy

**Cleveland, Nov. 2.**—Lake Superior iron ore shippers are closing up the season's business, with small, scattered sales. One or two furnace companies that were negotiating for sizable tonnages give no indication of closing. A Sharon, Pa., maker of low phosphorus iron that was inquiring for Lake Superior ore is understood to have closed for around 200,000 tons of ore for shipment from Port Henry, N. Y. The contract is for delivery over several years. Lake Superior producers say that it would be difficult to fill any more large orders this season; they have been rushed to deliver ore previously booked, and the season's total shipments are likely to exceed 60,000,000 tons.

Another monthly shipping record was set in October, with a total of 9,337,463 tons moved by vessels. The former high mark for October was 9,116,196 tons in 1916. The amount of ore brought down this season to Nov. 1 was 54,568,371 tons, 4,751,902 tons more than in the same period last year. The following shows consumption and docks balances:

| | Tons |
|---|---|
| Ore consumed in August | 4,796,187 |
| Ore consumed in September | 4,737,812 |
| Decrease in September | 58,375 |
| Ore consumed in September 1925 | 4,010,826 |
| Ore at furnaces Oct. 1, 1926 | 30,438,269 |
| Ore on Lake Erie locks Oct. 1, 1926 | 6,897,350 |
| Total at furnaces and Lake Erie docks Oct. 1, 1926 | 37,335,619 |
| Total Oct. 1, 1925 | 38,423,322 |

## Bars

### Slackening in Demand Is Apparent—Prices Hold at Previous Levels

DECREASED buying of soft steel bars is noted in the West and whole specifications there have held their pace, eastern makers find lessening in that respect. Various causes are held responsible, approach of inventory and lessened automotive production being prominent. Other consuming lines continue active. Prices are not affected by other conditions.

BAR PRICES, PAGE 1182

**Chicago, Nov. 2.**—Despite smaller advanced bookings of soft steel bars and several other lines of finished steel, no slackening in specifications is perceptible. October specifications, which have been running ahead of shipments, attained a volume practically equivalent to September, which came close to setting a record for early fall months. Including October rail tonnages, the month's bookings of heavy finished steel were 35 to 40 per cent ahead of September. Western mills, in view of continued stability in many lines of steel consumption, feel assured of a demand sufficient to fill schedules for the remainder of the year. Output is equal to the past two months. Mills the past week have felt lessened demand from automotive interests more acutely than heretofore. Fabricators of steel for automotive parts reflect similar depression. On the other hand, farm implement makers are likely to maintain steadier specifications for the remainder of the year than was indicated a month ago. Some implement makers find rains and floods will have little effect on next season's farm demands and are looking for a good year in 1927. Rail steel bar mills are running double turn and backlogs are accumulating. Railroad demand for iron bars is more active. Both rail steel and bar iron are steady at 2.00c, Chicago, and 2.10c, Chicago, is firm for soft steel bars.

**Boston, Nov. 2.**—Bar demand in small lots shows a good total. One seller reports tonnage placed during the past week above the average for the year. The price is firm at 2.00c, Pittsburgh. Some sales at 2.10c are reported for lots below 100 tons.

**Buffalo, Nov. 2.**—First quarter bar specifications are reaching Buffalo steelworks in increasing quantities. Considerable late fourth quarter business has been booked within the past 10 days, at prices ranging from 2.265c to 2.365c, depending on tonnage. Steelworks are not offering to quote 2.265c freely on first quarter business but the price probably is being obtained in larger tonnage negotiations for fourth and first quarter shipment.

**Pittsburgh, Nov. 2.**—Some recession is noticed in steel bars, particularly from curtailed specifications from cold bar finishers and automobile spring makers. While some automobile companies are proceeding with heavy production schedules, others are anticipating inventory period and cutting down orders. It is generally expected the setback will be short. On the other hand, coal mine car builders are specifying more freely, some attractive tonnages being noted over the past two weeks. Merchant steel bar making is still on a 75 or 80 per cent basis.

Refined iron bars are moving fairly well, but only small lots are bought. Prices vary from 3.00c to 4.50c.

**Cleveland, Nov. 2.**—Save for the automotive industry, demand for soft steel bars continues practically unchanged. October bookings of most makers were within an average of 5 to 10 per cent of September, while shipments in October were substantially equal to September. The Corrigan, McKinney Steel Co. has started its new 10-inch bar mill and has scheduled its 12-inch mill to go in about Jan. 1. The range on soft steel bars here is 2.00c to 2.19c, delivered, but the lower of the spread applies at this time only to the smaller sizes of rounds, flats and squares.

## Hoops and Bands

### Mills Continue Fair Activity with Automotive Demand Larger

HOOP PRICES, PAGE 1182

**Pittsburgh, Nov. 2.**—Narrow mills are fairly active on miscellaneous specifications in hoop and band sizes of hot rolled flats. While there was some reduction in automotive tonnage late in October, this now gives signs of improvement and other consuming lines are maintaining a fairly active demand for small lots. The price is firm at 2.50c.

## Name Shovel Standards

In its campaign to eliminate waste through simplified practice, the bureau of standards has published Simplified Practice Recommendation No. 48 dealing with shovels, spades and scoops. This recommendation was unanimously adopted on April 29 by the joint conference of representatives of manufacturers, distributors and users of these implements, and the bureau of standards. By the new specifications, which became effective July 1, 1926, only three grades are to be made instead the four grades as formerly.

# The Market Section

# Structural Shapes

**New York Again Renews Leadership in Structural Market With Inquiries Totaling More Than 30,000 Tons and Large Awards**

STRUCTURAL steel markets of the past week were featured by the return of New York metropolitan district to activity. Inquiries on which action is being taken or is expected shortly in New York for the past week total more than 30,000 tons. The largest, for 11,500 tons, is for another subway section. A New York Central office building requires 9000 tons, and the New York Athletic club 7500 tons. Awards outside of the New York and Chicago territories generally have been confined to small lots.

October bookings averaged under those of September and November is expected to show further decline. Buyers hesitate to make forward commitments. Structural fabricators are working off backlogs but mills continue well booked.

STRUCTURAL SHAPE PRICES, PAGE 1182

**New York, Nov. 2.**—Structural inquiry is featured by 11,500 tons for another subway section, 9000 tons for an office building and by 7500 tons for the New York Athletic club, previously noted as contemplated. Several other inquiries are noted involving 1000 tons and higher. Considerable work is on the verge of closing, but recent trading has been only fair. Plain material is holding at 1.90c to 2.00c, Pittsburgh, with fabricated material also showing little change.

A large eastern shape mill reports that October bookings were 3 per cent less than for September. This interest regarded the feature of October structural business the large amount of buying for immediate consumption.

**Boston, Nov. 2.**—Decline in structural contracts has continued. Inquiry is fair but slow to develop into contracts. Three projects at Providence, R. I., total 5000 tons. Prices range from 1.90c to 2.00c, Pittsburgh.

**Philadelphia, Nov. 2.**—Demand continues to reflect shrinkage of plain shapes with mills able to make fairly prompt delivery in most sections. Prices range from 1.85c to 2.00c, Pittsburgh, with occasional consumers doing even lower.

**Pittsburgh, Nov. 2.**—The general situation in structural shapes is indicated by the fact that one large fabricator here reports its total awards last week as 100 tons, represented in several jobs. With the county bridges out of the way, as noted last week, the largest tonnage pending is an apartment house involving about 800 tons, which is being revised. Competition continues severe but fabricators generally feel better than a year ago. While their books do not show profits they at least are climbing out of the red figures which a year ago generally prevailed.

**Cleveland, Nov. 2.**—Bridge work constitutes the largest inquiries to be brought out in this territory in months. If the interstate commerce commission favors construction of a line to join the Chesapeake & Ohio and Hocking Valley railroads, about 10,000 tons of structurals will be required. Miscellaneous fabricating demands in the Cleveland territory are lighter. Specific awards are few, including 1100 tons for a National Radiator Co. building at New Castle, Pa., to the Fort Pitt Bridge Works.

**Chicago, Nov. 2.**—Structural materials are quiet, and liquidation of stocks in preparation for inventory taking has begun. While structural work involving heavy tonnages of shapes is pending, current awards are slow. Backlogs of fabricators are not heavy, but the larger shops will be well booked for 30 days at least. Awards the past week were largely for railroad and highway bridge work. The price of 2.10c, Chicago, for plain material is well maintained.

## Awards Compared

| | Tons |
|---|---|
| Awards this week | 21,394 |
| Awards last week | 19,894 |
| Awards two weeks ago | 16,670 |
| Awards this week in 1925 | 41,094 |
| Average weekly awards, Oct. | 21,312 |
| Average weekly awards, 1926 | 28,139 |
| Total awards to date, 1925 | 1,469,633 |
| Total awards to date, 1926 | 1,231,396 |

## CONTRACTS PLACED

2600 tons, transmission towers, for a utilities company in Tennessee, to Blaw-Knox Co.

1900 tons, plant for Goodyear Tire & Rubber Co., Akron, O., to Berger Iron Works.

1800 tons, Manger hotel addition, Seventh avenue, New York, to unstated fabricator.

1300 tons, miter gates, Lockport and Marseilles, Ill., deep waterway locks, to Independent Bridge Co.

1100 tons, apartment, 883 Park avenue, New York, to Hinkle Iron Works.

1100 tons, apartment, East Fifty-seventh street, New York, to Paterson Bridge Co.

1100 tons, apartment, Washington square and Waverly place, New York, to Harris Structural Steel Co.

1100 tons, addition to National Radiator Co., New Castle, Pa., through H. K. Ferguson Co., Cleveland, general contractor, to Fort Pitt Bridge works.

850 tons, powerhouse addition for the Virginia Electric Power Co., Norfolk, Va., to American Bridge Co.

850 tons, two projects in the New York metropolitan district, to a local fabricator.

680 tons, warehouse, St. John's place, Brooklyn, N. Y., to Joseph Gaydica Iron Works.

500 tons, apartment, Ninety-third street and West End avenue, New York, to Paterson Bridge Co.

500 tons, building for Firestone Tire & Rubber Co., Akron, O., to Berger Iron Works.

500 tons, garage for Joshua Bodeck, Philadelphia, to unnamed fabricator.

450 tons, Mid-Continent Construction Co., Chicago, highway bridge for Cook county, near Riverdale, Ill., to American Bridge Co.

400 tons, miscellaneous bridge repairs for the New York Central railroad, to various fabricators.

300 tons, dock shed, Miami, Fla., to Ingalls Iron Works Co.; 100 tons corrugated sheets also placed for repairs of damages caused by recent hurricane.

255 tons, Callahan building, Market and McAllister streets, San Francisco, to Pacific Rolling Mill Co.

250 tons, plant addition, Royal Bed Spring Co., Cincinnati, to William Lange.

250 tons, bridge in Baltimore for Western Maryland railroad, to Bethlehem Steel Co.

250 tons, bridge for Chesapeake & Ohio railroad, to unstated fabricator.

200 tons, crane runways, Finkbind-Guild Lumber Co., California City, Calif., to Pacific Rolling Mill Co.

200 tons, powerhouse addition, Amarillo, Tex., to Austin Bros.

200 tons, Shrine mosque for Tripoli Temple, Milwaukee, to Milwaukee Bridge Co.

200 tons, Pennsylvania railroad bridge, Bucyrus, O., to American Bridge Co.

200 tons, addition, Lowell Electric Light Co. plant, Lowell, Mass., to Lehigh Structural Co.

190 tons, baby hospital, Oakland, Calif., to California Steel Co.

180 tons, bridge at Wissahickon station, Philadelphia, to McClintic-Marshall Co.

175 tons, deck and through plate girder spans for Chicago, Burlington & Quincy railroad, to McClintic-Marshall Co.

175 tons, Fifth Church of Christ Scientist, Cleveland, to National Iron & Wire Co.

175 tons, junior high school, Evanston, Ill., to Milwaukee Bridge Co.

169 tons, apartment, Larkin near Lombard street, San Francisco, to Herrick Iron Works.

150 tons, addition to Christian Science church, Chicago, to Rutter Bros.

150 tons, crane runway for International Harvester Co., Rock Island, Ill., to Holmes Pyott & Co.

125 tons, Pennsylvania electrification work, Wilmington, Pa., to Phoenix Bridge Co.

125 tons, apartment, Bush and Jones streets, San Francisco, to Herrick Iron Works.

120 tons, Waynesburg, Pa., school, to Pittsburgh-Des Moines Steel Co.

120 tons, two 24 x 75-foot plate girder spans, Cascade, Dubuque county, Iowa, to Clinton Bridge Works.

115 tons, bank, Thirteenth avenue and Forty-eighth street, Brooklyn, N. Y., to Kues Bros.

110 tons, Munhall, Pa., school, to Homestead Iron Works, Homestead, Pa.

100 tons, addition for Weiland Dairy Co., Adell, Wis., to Milwaukee Bridge Co.

100 tons, building for International Harvester Co., St. Louis, to Mississippi Valley Structural Steel Co.

100 tons, Wilmette theater, Wilmette, Ill., to Gage Structural Steel Co.

100 tons, approximately, National Radiator Co., Keeler and Fullerton avenues, Chicago, to Duffin Iron Co.

100 tons, Winter Hill garage, Somerville, Mass., to New England Structural Co.

Several hundred tons, church, Fordham road and University place, New York, to Hinkle Iron Works.

Tonnage unstated, buildings for flying field at Dayton, D.; E. H. Latham, Columbus, O.,

general contractor, steel reported awarded independent fabricator.

## CONTRACTS PENDING

11,500 tons, subway, section 5, route 101, New York; Oakdale Contracting Co. Inc. low on general contract.

10,000 tons, bridge work for Chesapeake & Hocking railroad to link the Chesapeake & Ohio & Hocking Valley provided interstate commerce commission agrees. Hocking Valley is expected to buy steel in Columbus, O.

9000 tons, office building for New York Central railroad, Forty-fifth to Forty-sixth street, between Vanderbilt and Depew avenues, New York, general contract to James T. Stewart; structural bids not likely to be asked for several weeks.

7500 tons, New York Athletic club building, New York; bids asked; this was previously noted as likely to be up shortly; York & Sawyer are architects.

4500 tons, bridge, Cape Girardeau, Mo.; pending.

3500 tons, municipal building, Denver, general contractors' bids received Oct. 29; pending.

2500 tons, bridge at Havre de Grace, Md.; pending.

2500 tons, Chicago Mercantile Exchange building, Washington and Franklin streets, Chicago, bids due about Nov. 12; Alfred S. Alschuler Inc., 28 East Jackson boulevard, architect.

2300 tons, Masonic building, Providence, R. I.; pending.

2000 tons, Municipal Court building, 1121 South State street, Chicago, steel bids due Nov. 16; Graham, Anderson, Probst & White, 80 East Jackson boulevard, architects.

1800 tons, apartment, 775 Park avenue, New York; bids asked.

1600 tons, two railroad bridges in Ohio; pending.

1500 tons, shapes for the new Interlake Steamship Co. vessel for which contract has been awarded the American Shipbuilding Co., Lorain, O., yards. Steel expected to be awarded Bethlehem Steel Co.

1500 tons, bridgework purposes, Louisville & Nashville railroad; bids in Nov. 4.

1500 tons, municipal building, Baltimore; bids asked.

1400 tons, addition to the Lenox avenue shops of transit commission, New York; bids asked.

1200 tons, Illinois hotel, Aurora, Ill., pending; H. G. Christman, South Bend, Ind., contractor.

1000 tons, 6-story boys' club, 111th street, New York; general contract awarded John Laurie, 71 Madison avenue; previously noted as pending.

850 tons, 9-story apartment, Kew Gardens, L. I.; bids asked.

800 tons, Aiken apartment building, Pittsburgh; to be revised.

700 tons, Corn Exchange bank Forty-second street and Eighth avenue, New York; bids asked.

600 tons, Y. W. C. A. residence, Dearborn and Oak streets, Chicago, contractors' bids about Nov. 12; Berlin & Swern, 19 South La Salle street, architects.

500 tons, public school 189, Bronx, New York; bids asked.

400 tons, Williams college gymnasium, Williamstown, Mass; bids in.

400 tons, power house for Fairbanks Exploration Co., Fairbanks, Alaska; bids by Stephens & Wood, Inc., 120 Broadway, New York.

360 tons, theater, Kankakee, Ill., pending; Hooper & Janusch Inc., 879 North State street, Chicago, architects.

350 tons, athletic building, Brown university, Providence, R. I., bids being taken.

300 tons, building for Fordham university, New York, pending.

300 tons, First National Stores warehouses, Somerville, Mass.; bids close Nov. 9.

280 tons, Dartmouth college library, Hanover, N. H.; bids in.

250 tons, girder stand for Chesapeake & Ohio railroad at Lyle, Va.; bids in.

250 tons, Central State bank, Whiting, Ind., refigured, general bids due Nov. 5.

200 tons, gas house for the Ravens Wood Works, Long Island City, L. I.; bids asked.

200 tons, power house at Martinsburg, W. Va., for Dwight P. Robinson & Co. Inc., New York; bids in.

150 tons, public school, Columbus, O.; bids in.

150 tons, alterations to Dime Savings bank, Sixth avenue and Fortieth street, New York; action expected shortly; Alfred Taylor, architect.

100 tons, Maramour building, Columbus, O.; pending.

# Concrete Bars

**Despite Diminishing Inquiries Buying Continues Fair—Prices Remain Steady**

AN INQUIRY for 1273 tons for an athletic club in Chicago features inquiry for the past week. New work is not appearing in the same volume of previous weeks. Awards also have slipped off some and the start of reduced buying for winter construction is expected. Prices show no change and on the bulk of small lots 2.00c, Pittsburgh, equivalents continue named.

REINFORCING BAR PRICES, PAGE 1182

**Chicago, Nov. 2.**—Rail steel mills are not seeking additional business in reinforcing bars as they have substantial backlogs. Fresh building projects involving reinforcing bar tonnages have dropped off sharply, but a number of important jobs are under consideration for placement soon, and several bar shops are busy figuring on pending work. A large aggregate tonnage of rail steel bars was awarded in small lots the past week, but billet bar awards were lighter. One of the larger pending projects is the Edgewater Athletic club, on Sheridan road, Chicago, which will take 1273 tons.

**Boston, Nov. 2.**—Concrete bars are less active. Recent awards have been nearly all for small tonnages. Some large work is in sight. The Boston warehouse price ranges from 2.85c to 3.00c and the mill price holds close to 2.265c.

**Pittsburgh, Nov. 2.**—A fairly active week is ahead of concrete bar sellers if all pending propositions materialize. These include two hospitals, two or three schools, and some miscellaneous structures as well as additional road work. The price is firm at 2.00c.

**Cleveland, Nov. 2.**—Small lot buying is more prevalent, no inquiries involving more than 50 tons being brought out in the past week and total awards received by any one seller reaching about the same limit. New billet bars continue unchanged at 2.19c, Cleveland, or 2.00c, Pittsburgh. Rail steel is steady at 1.80c, mill. Reinforcing bars from local jobbers are quoted 2.50c, Youngstown, to 3.00c, Cleveland.

## Awards Compared

| | Tons |
|---|---|
| Awards this week | 3,892 |
| Awards last week | 3,822 |
| Awards two weeks ago | 10,186 |
| Awards this week in 1925 | 3,630 |
| Average weekly awards, Oct. | 8,072 |
| Average weekly awards, 1926 | 6,498 |
| Total awards to date, 1925 | 273,113 |
| Total awards to date, 1926 | 283,340 |

## CONTRACTS PLACED

1200 tons, fourth section, Central Parkway, Cincinnati, to Joseph T. Ryerson & Son Inc.

400 tons, Washington Heights subway, New York, to Milton Mfg. Co. through Day & Goater. Rodgers & Hagerty Inc., general contractor.

300 tons, plant, Southwestern Portland Cement Co., Oxford, O., divided equally between Pollak Steel Co. and West Virginia Rail Co.

300 tons, building for Cooper-Hewitt & Co., Hoboken, N. J., to McClintic-Marshall Co. through Industrial Engineering Co.

300 tons, Sears, Roebuck & Co., building at Philadelphia, to Davis Bros.

200 tons, Plaza garage, Camden, N. J., to Concrete Steel Co.

175 tons, Shrine mosque for Tripoli Temple, Milwaukee, to American System of Reinforcing.

150 tons, warehouse, Hartford, Conn., to Concrete Steel Co.

142 tons, Mather building, Chicago, to Olney J. Dean & Co.

125 tons, addition to Weiland Dairy Co., Adell, Wis., to Concrete Steel Co.

100 tons, Reading railroad bridge, Manayunk, Philadelphia, to McClintic-Marshall Co.

100 tons, school, New Britain, Conn., to Concrete Steel Co.

100 tons, office building, Springfield, Mass., to Kalman Steel Co.

100 tons, Peoples Trust & Guaranty Co., Hackensack, N. J., to Concrete Steel Co. through Hegeman-Harris Co. Inc.

100 tons, Reo Motor Co. building, New York, to Joseph T. Ryerson & Son Inc., through White Construction Co.

100 tons, miscellaneous work including Munhall, Pa., school, 40 tons, and road work in Windber borough, Johnstown, Pa., for Sky Construction Co., 25 tons, to Truscon Steel Co.

## CONTRACTS PENDING

1273 tons, Edgewater Athletic club, 5801 Sheridan road, Chicago. Paul Gerhardt, 64 West Randolph street, Chicago, architect.

1200 tons, First National Stores warehouse, Somerville, Mass.; bids close Nov. 9.

1100 tons, state highway bridge, Newark, N. J.; A. J. O'Neil Construction Co., Philadelphia, low bidder on general contract.

800 tons, sewerage outfall, Lynn, Mass.; bids close Nov. 9.

800 tons, convention hall superstructure, Atlantic City, N. J.; pending.

400 tons, garage, Gainsboro street, Boston; bids in.

350 tons, Pierce Arrow garage, Boston, bids close Nov. 6.

300 tons, Tasty Baking Co. building, Philadelphia; general contract to Turner Construction Co.

240 tons, school, Ahens Lane, Philadelphia; pending.

200 tons, Hearst Moulder school, San Francisco; Badt-Fall Co. low bidder.

125 tons, athletic building, Brown university, Providence, R. I.; bids being taken.

100 tons, Wesel Mfg. Co. building, Scranton, Pa.; pending.

100 tons, Industrial Trust building, Providence, R. I.; general contract to Starrett Bros., New York.

Tonnage unstated, buildings for Western Electric Co., Hawthorne, Ill.; general contract to Turner Construction Co.

## Bethlehem Steel Net Shows Gain Over 1925

Net earnings of the Bethlehem Steel Corp. amounted to $34,654,135 in the nine months ended Sept. 30. This compared with $28,445,606 in the corresponding period of 1925. For the third quarter the net was $10,585,064 against $8,337,762 in the third quarter of 1925.

Company operations now are at 82 per cent of capacity compared with 80 per cent at this time last year, according to President E. G. Grace. During the third quarter operations averaged 80.3 per cent of capacity compared with 82.6 per cent in the previous three months and with 59.7 per cent in the third quarter of 1925. The earnings in the third quarter compared with the corresponding quarter one year ago follow:

| | 1926 | 1925 |
|---|---|---|
| Net earnings | $10,585,064 | $8,337,762 |
| Interest, etc. | 2,873,037 | 3,262,116 |
| Depreciation, depletion | 3,161,049 | 2,984,967 |
| Net income | 4,550,978 | 2,090,659 |
| Preferred dividends | 1,718,645 | 1,075,774 |
| Surplus | 2,832,333 | 1,014,885 |

The nine months results of 1926 and 1925 follow:

| | 1926 | 1925 |
|---|---|---|
| Net earnings | $34,654,135 | $28,445,606 |
| Interest, etc | 9,544,293 | 9,901,479 |
| Depreciation, depletion | 9,344,991 | 8,958,741 |
| Net income | 15,764,851 | 9,585,366 |
| Preferred dividends | 5,380,160 | 3,227,202 |
| Common dividends | ..... | ..... |
| Surplus | 10,384,691 | 6,358,164 |

"The value of orders on hand Sept. 30, 1926," President Grace said, "was $44,553,571, as compared with $50,010,117 at the end of the previous quarter and $46,509,167 on Sept. 30, 1925. With the growth of the policy of buying for immediate consumption, it is quite evident that the value of orders on hand is becoming less important as a barometer for conditions in the industry. There was a large and steady demand for most lines of products throughout the third quarter, with no accumulation of stocks. The buying of seasonal products, such as rails and railroad supplies, while negligible during the third quarter, has been substantial during October, and with good demand continuing for other products the value of orders on hand has been steadily increasing since the first of the month."

## Inland Earnings Higher

Net profits of the Inland Steel Co. made a sharp gain in the third quarter of 1926 compared with the corresponding period one year ago. The net after expenses was $2,673,316 against $1,794,078 in 1925. The quarter's surplus after depreciation, taxes and dividends amounted to $787,836 compared with $274,985 in the like period of 1925. For the nine months ended Sept. 30, the company had net earnings of $7,875,031 against $5,406,572 in the corresponding period of 1925. The nine months surplus was $2,201,769 against $705,869 one year before.

**The wire cables for the Brooklyn bridge, which was completed in 1883, were made of American steel.**

# Rails, Cars

**Rail Placements in Chicago District Total 120,000 Tons—Equipment Buying Scattered**

RAILS continue the bright spot of railroad buying. Chicago district mills received bookings of more than 120,000 tons in the past week. Specifications for 1927 deliveries are started earlier than in previous years. Track accessory inquiries are heavy. Equipment activity is lacking as small orders for cars and locomotives are placed.

RAILROAD TRACK MATERIAL PRICES, PAGE 1182

**Chicago, Nov. 2.**—Specifications against 1927 rail contracts are coming in much earlier than in previous years. Mills here now have on their books the bulk of the rail business to be placed in the territory for 1927. This totals approximately 500,000 tons, including lots for fall delivery but not counting heavy pending tonnages of track accessories. Bookings the past week totaled more than 120,000 tons. Reports are that of the Chesapeake & Ohio distribution of 45,000 tons, almost 50 per cent went to western mills. Missouri Pacific also has placed its 45,000 tons. Of this the Tennessee Coal, Iron & Railroad Co. was awarded 20,000 tons, it is reported. Both of these roads are to place track accessory orders. It is understood Missouri Pacific's inquiry calls for 12,000 to 20,000 tons of accessories. Pennsylvania railroad is inquiring for about 900 tons of special steel tie plates. While official figures are not disclosed, it is estimated that by the end of this year Chicago mills will have shipped 800,000 tons of rails exclusive of fastenings. Indications are that at least as much will be shipped next year, which will leave approximately 300,000 tons to be placed in the remainder of this year and throughout next year for 1927 needs. While rail mills are working on reduced schedules output is being increased gradually. Wabash and Missouri Kansas & Texas roads are inquiring for track accessories.

Chicago & North Western is expected to release more inquiry for its car requirements shortly.

**New York, Nov. 2.**—Car buying in October exceeded that of September, but it was not up to the volume generally expected. The past week was devoid of any large orders. Inquiry also was restricted. Locomotive demand is featureless. The 42 miles of 60-pound rails for the Karafuto railway in Japan, on which American mills submitted quotations, have been placed with the Japanese rail mill.

**Pittsburgh, Nov. 2.**—Due to expanding activity in coal mining districts, light rail orders are more frequent. These buyers still refuse to place large tonnages, and individual orders rarely exceed two or three carloads. Makers claim that the $36 price is firm.

Local makers expect to share in the track accessory orders to be placed by the Pennsylvania railroad. Standard spikes are selling at 2.80c to steam roads and 2.90c to other buyers. Small spikes are firm at 2.90c, that having been the established minimum for two or three months. Tie plates bring $47, no $45 quotations being obtainable here.

### CAR ORDERS PLACED

Associated Oil Co., San Francisco, one side dump car, to Clark Car Co.

Chicago & Bloomington Stone Co., Bloomington, Ind., to Clark Car Co.

Chicago & North Western, 100 flat cars, to Bettendorf Co.

Delaware & Hudson, 10 side dump cars, to Clark Car Co.

Gulf Refining Co., eight gondolas, to Standard Steel Car Co.

Louisville & Nashville, 250 automobile cars and 250 flat cars, to Tennessee Coal, Iron & Railroad Co., instead of 200 of each type as previously reported.

New York Rapid Transit Corp., 10 flat cars and two box cars, to Pressed Steel Car Co. and a motor supply car to Differential Car Co.

Norfolk & Southern,, 100 gondolas, to Virginia Bridge & Iron Co.

Philadelphia, 150 steel passenger cars and car trucks, six extra motor trucks and four extra trailer trucks, for subway operation, to J. G. Brill Co.

Standard Slag Co., seven 30-yard side dump cars, to Clark Car Co.

#### LOCOMOTIVE ORDERS PLACED

Long Island railroad, two oil-electric switch engines, to be built jointly by American Locomotive Co., General Electric Co. and Ingersoll-Rand Co.

New York Central, 14 snow plows, to Russell Car & Snow Plow Co.

Norfolk & Western, 30 additional locomotive tenders, to its Roanoke shops.

Singer Mfg. Co., one locomotive, to Montreal works of American Locomotive Co.

State purchasing department, California, one tank locomotive, to American Locomotive Co.

### CAR ORDERS PENDING

Carnegie Steel Co., eight hopper cars; bids asked.

Chicago, Indianapolis & Louisville, six caboose cars; pending.

Chicago & North Western, 500 underframes and superstructures; inquiries out.

Chicago & North Western, eight baggage cars; pending.

Missouri, Kansas & Texas, 300 hopper cars; contemplated.

New York Central, 60 automatic dump cars; bids asked.

Phillips Petroleum Co., reported inquiry for tank cars increased to 700.

## Gulf States Net Off

Net income of the Gulf States Steel Co., Birmingham, Ala., for the third quarter of 1926 was $148,288, after depreciation and federal taxes. This compares with net income of $210,732 in the corresponding quarter of 1925.

# Wire

**Specifying Fair but New Business Below September Rate—Operations 50 to 60 Per Cent**

FAIR specifications continue to be received by wire and nail manufacturers but new business has fallen off perceptibly from the September and early October buying rate. Mills continue scheduled from 50 to 60 per cent of capacity. Prices generally are at the established levels. Boston sellers find unusually keen competition on quotations of 2.50c, Pittsburgh, for plain wire.

WIRE PRICES, PAGE 1182

**Pittsburgh, Nov. 2.**—Wire products makers appear to be enjoying a fair specifying rate on nails, although this is the quiet season. A few specifications are received against 60-day contracts. Manufacturers' wire is active but fencing wire, due to seasonal influences, is quiet, as is barbed wire, except for certain sections of the country. October tonnage fell off five or 10 per cent from September, but November gives promise of making up the deficit. An order for cement coated nails placed recently involved four or five carloads but most orders are for single carloads. Operations vary between 50 and 60 per cent, but all base prices are firm.

**Boston, Nov. 2.**—Both demand and prices are spotty. Keen competition has forced concessions below the 2.50c Pittsburgh level. Nails are selling at Boston at 3.04c. Wire is nominally quoted at 2.875c Boston.

**New York, Nov. 2**—Demand for wire and wire products continues at a lower rate than during September. Although the order books are not so large, they are large enough to enable the mills of the country to continue to operate at schedules which approximate 40 to 60 per cent of the country's capacity. The wire price is firm at 2.50c base Pittsburgh. There is some cutting of the nail price but fully 80 per cent of the current business is entered at the full price of 2.65c base Pittsburgh. Foreign nails continue to be sold in fair volume along the South Atlantic seaboard at about 2.70c, duty paid, tidewater.

**Chicago, Nov. 2.**—Jobbing demand for wire products, while conservative is at a steady rate, but manufacturing demand continues to lead. Slowing down of operations at automotive works has had little effect on manufacturing requirements. Mills operations are slightly above 60 per cent. Prices are firm.

## Bolts, Nuts, Rivets

**Slight Recession from Previous Months—Jobbers Buy Little**

NUT AND BOLT PRICES, PAGE 1182

**Pittsburgh, Nov. 2.**—Aggregate business in nuts and bolts in October showed only a slight recession from the two preceding months in point of tonnage shipped. New business does not show much improvement, however, but considerable betterment is expected before the month is out. Operations average 60 to 70 per cent. Jobbers are not buying, having well filled stocks, and important users are purchasing in small lots. Rivets have sold below 2.50c, but 2.50c to 2.60c continues the quotable market here.

**Chicago, Nov. 2.**—Railroads and farm implement makers are more active in specifications for bolts and nuts. Slackening automotive demand has become more acute. Prices continue firm.

**Cleveland, Nov. 2.**—Although automotive demand for bolts and nuts has slackened somewhat aggregate business is holding up to a comparatively high level with quotations firm and unchanged on the basis of 50, 10 and 10 off for large machine bolts. Rivet specifications continue at a good rate with railroad buying featuring the market. Large rivets are firm at 2.60c, base Pittsburgh.

## Strip Steel

**Release of Suspended Automotive Tonnage Aids Mill Activity**

STRIP PRICES, PAGE 1182

**Pittsburgh, Nov. 2.**—Some suspensions in automotive tonnage in hot and cold strip steel have been released, and additional new business has been placed by automotive parts makers. Competition is keen on cold strips, and the practice of considering each specification on its merits is growing. On some attractive specifications as low as 3.25c has been quoted, but some makers in this territory adhere to 3.50c to 3.60c, being unable to purchase billets to permit of a lower selling price. In connection with hot strips, no question arises as to price, there still being enough business to sustain the 2.30c quotation. One large producer finished October with a total hot strip tonnage equivalent to 75 per cent of normal. Strip mill operations in this territory average 55 to 60 per cent.

**Cleveland, Nov. 2.**—Strip steel buying from sources other than automotive manufacturers holds steady, but specifications are being held up by the auto parts makers. Shipments on narrow sizes are in some cases deferred from five to six weeks, but on wider widths two weeks deliveries are possible. Hot strip prices remain firm at 2.30c on wide and 2.50c on narrow sizes. Cold rolled strip continues variable with demand decidedly off from the September volume.

## Cold Finished Steel

**Lessened Automotive Buying Reduces Activity Sharply**

**Pittsburgh, Nov. 2.**—The shrinking of automotive specifications is the immediate cause of curtailment in new business on cold finished bars. Other consuming lines are buying fairly well. Operations are maintained at about 60 to 65 per cent. On ordinary sales the price is 2.40c since contracts recently were written down from 2.50c to that level. No interest is manifested in first quarter.

## Refractories

**Higher Fuel Costs Have Influence on Production Schedules**

REFRACTORIES PRICES ON PAGE 1223

**Pittsburgh, Nov. 2.**—Shipments of refractories are slowing somewhat as operations among steel mills are curtailed. Schedules of the latter are in some cases down to between 60 and 70 per cent, with a few exceptions maintaining higher rates of 75 or 80 ner cent. Brick kiln schedules average between 50 and 60 per cent as a rule although one or two still are on a 65 per cent basis. These are bringing their shed stocks into balance. The rising fuel market however, in its possible effect on the prices of refractories may influence them to stock more heavily. Brick kiln operators are faced with practically 100 per cent increased coal costs. New construction is limited, a new blast furnace at Ashland, Ky., now being projected, involving practically the only large brick inquiry. Deliveries still are being made against large contract requirements for blast furnaces of the Carnegie Steel Co. and various coke oven propositions at Detroit, Indianapolis and elsewhere. Brick prices are unchanged but may shortly reflect the higher coal costs.

## Alloys Still Inactive

**Cleveland, Nov. 2.**—Continued dullness marks the alloy steel market in the Cleveland territory. Some fair-sized buying is being done in the Detroit district, but the diminished automotive production still is being felt. Despite the slowing of demand prices reflect no more than the usual weakness.

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The two concrete anchorages of the Delaware bridge, which connects Philadelphia and Camden, N. J., weigh approximately 400,000 tons.

# Nonferrous Metals

**Zinc, Tin and Lead Buying Active But Demand for Copper Was Slow During Past Week—Shipments Continue Large**

## Prices of the Week, Cents a Pound

| | Copper: Electro delivered | Copper: Lake delivered | Copper: Casting refinery | Spot Straits Tin, N. Y. | Lead New York | Lead East St. Louis | Zinc St. Louis | 98-99% Aluminum | Spot Antimony | Ingot Nickel |
|---|---|---|---|---|---|---|---|---|---|---|
| Oct. 27 | 14.00 | 14.12½ | 13.80 | 69.37½ | 8.25 | 8.00 | 7.22½ | 27.00 | 13.75 | 35.00 |
| Oct. 28 | 14.00 | 14.12½ | 13.75 | 68.87½ | 8.25 | 8.00 | 7.22½ | 27.00 | 13.75 | 35.00 |
| Oct. 29 | 14.00 | 14.12½ | 13.70 | 68.25 | 8.25 | 8.00 | 7.25 | 27.00 | 13.62½ | 35.00 |
| Nov. 1 | 14.00 | 14.12½ | 13.65 | 68.25 | 8.10 | 7.90 | 7.27½ | 27.00 | 13.05 | 35.00 |
| Nov. 2 | | | Election | Holiday | | | | | | |

NEW YORK, Nov. 2.—Buying of zinc, tin and lead has been active the past week but the copper market has been slow. Shipments of all metals continue large and such buying as is done is mostly for November shipment. Fluctuations in the London market have been a powerful factor in putting tin and lead down, but the copper and zinc markets here have paid little attention to price swings on the London exchange.

Mill products of brass, copper, and lead were cut ¼-cent late last week. These cuts were in line with changes in virgin metals, but brass mills are well booked for November and their output changes little. Wire mills are fairly well booked.

**Tin**—The white metal was the most erratic in the nonferrous group but consumers bought good quantities, mostly for November, and speculators and dealers at times also made large purchases, with some of their business running much farther ahead. The market broke under 68.00c for spot and nearby and under 66c on futures, the first in a long time, with the continued fall in London on Monday, but buying caused a quick recovery here the some day. Spot has been getting easier but was so pinched Monday that it sold more than 1 cent above metal to arrive next week and 2½ cents above December delivery. World supplies are more liberal, as the visible supply at the end of October was 14,841 tons, an increase of 462 tons in the month. Shipments from the Straits were larger than expected at 6471 tons. Shipments in many months have been larger but never so large in October.

**Zinc**—Prime western zinc sold at 7.25c, East St. Louis, Saturday and Monday, or a little higher than other days of the week. Some prices were heard as low as 7.20c Monday morning but they quickly disappeared and some prompt was as high as 7.30c. Moderate business has been done each day, mostly for November but some for December. Brass special is mostly 5 to 10 points and high grade steady, 9.25c to 9.50c.

**Copper**—The market has shown much resistance at 14.00c delivered Connecticut (14.12½c Midwest) though not much business has been done. However, shipments continue near refinery capacity, especially for domestic use. Copper Exporters Inc. is working and there is less tendency to be influenced by the speculative market abroad, but there has been competition to get orders in this country with the result that the market here has been unusually low compared with the c.i.f. European port price at 14.40c.

**Lead**—The drop in London on Monday was a surprice here but caused a smaller drop here, 15 points in New York and 10 in the St. Louis market, to 8.10c and 7.90c, respectively. Business at 8.00c, East St. Louis, was of good size last week but New York was less active.

**Aluminum**—The price is reported to be steady though there are rumors of a little shading under the general level of 27.00c. Shipments are active, but almost entirely on old contracts.

## Mill Products

**Base prices cents per pound, f.o.b. mill**

| | |
|---|---|
| **SHEETS** | |
| High brass | 18.87½ |
| Copper, hot rolled | 22.50 |
| Zinc, (100-pound base) | 11.75 |
| Lead full sheets (cut ¼c more) | 12.00 to 12.50 |
| Aluminum, bright flat, up to 10 gage | 36.50 |
| **SEAMLESS TUBES** | |
| High brass | 23.75 |
| Copper | 24.50 |
| **RODS** | |
| High brass (round ⅝ to 2½-inch) | 16.62½ |
| Naval brass | 19.37½ |
| **WIRE** | |
| Copper, small lots | 16.00 |
| High brass | 19.37½ |

## Old Metals

**Dealers' buying prices, cents per pound**

| | |
|---|---|
| **HEAVY RED BRASS** | |
| New York | 8.50 to 8.75 |
| Chicago | 8.75 to 9.00 |
| Cleveland | 9.25 |
| **HEAVY YELLOW BRASS** | |
| Chicago | 7.50 to 7.75 |
| Cleveland | 7.25 |
| **ZINC** | |
| New York | 4.25 |
| Cleveland | 4.25 |
| **HEAVY COPPER AND WIRE** | |
| New York | 11.50 to 11.75 |
| Chicago | 10.25 to 11.00 |
| Cleveland | 11.25 |
| **RED BRASS BORINGS** | |
| New York | 8.00 to 8.25 |
| **YELLOW BRASS TUBING** | |
| Cleveland | 7.25 |
| **LIGHT COPPER** | |
| New York | 9.25 to 9.50 |
| Chicago | 9.25 to 9.50 |
| Cleveland | 9.75 |
| **LIGHT BRASS** | |
| Chicago | 6.75 to 7.00 |
| Cleveland | 5.75 |
| **ALUMINUM** | |
| Clippings | 21.00 |
| Borings, Cleveland | 14.00 |
| Cast | 18.50 |

## Secondary Metals

| | |
|---|---|
| Remelt aluminum No. 12 | 22.50 to 23.00 |
| Brass ingot, 85-5-5-5 | 12.00 to 12.25 |

# Coke By-Products

**Neither Production Nor Prices Have Reacted to Steel Recession**

**New York, Nov. 2.**—Slight falling off in steel operations has not affected coal tar by-products production, and prices hold unchanged. Pure and 90 per cent benzols are 24 cents, works, per gallon, for material in tank car lots and 29 cents, in drums; toluol and solvent naphtha, 35 cents, works, in tanks and 40 cents, in drums; and commercial xylol, 36 cents, works, in tanks and 41 cents, in drums. Demand is well maintained, with supplies restricted.

Back contracts continue to absorb the great bulk of production of sulphate of ammonia, with prices holding at $2.45 to $2.50, delivered, for material for domestic account and $2.45 to $2.50, port, for material in double bags for export. Current trading is slack. Naphthalene also is featureless at 6 to 7 cents, for flakes and 7 to 8 cents for balls.

## Coke Oven By-Products

**Per Gallon at Producers' Plants in Tank Lots**

| | Spot | Contract |
|---|---|---|
| Pure benzol | $0.24 | |
| 90 per cent benzol | 0.24 | |
| Toluol | 0.35 | |
| Solvent naphtha | 0.35 | (nominal) |
| Commercial xylol | 0.36 | (nominal) |
| Phenol | 0.22 | 0.22 |

**Per Pound at Producers' Plants**

| | |
|---|---|
| Naphthalene flakes | 0.06 to 0.07 |
| Naphthalene balls | 0.07 to 0.08 |

**Per 100 Pounds Delivered**

| | | |
|---|---|---|
| Sulphate of ammonia | 2.47½ | |

## Revise Ferro Drawback

Announcement has been made by the treasury department at Washington that one of its former decisions has been extended to provide for the payment of drawback on ferromanganese manufactured by the Bethlehem Steel Co., at its plants at Johnstown, Pa., and Sparrow's Point, Md., with the use of imported manganese ore.

# Warehouse

**Buying Trend Downward But Falling Off Is Gradual—October Totals Drop Slightly—Prices Remain Steady**

DESPITE a gradual decline in buying, iron and steel warehouses report favorable business for the season. October sales totaled less than September generally. A drop in Swedish steel quotations for New York delivery was the only marked price development of the week.

Users of warehouse products in the Cincinnati district continue small lot buying. Fabricators not booking business in the volume which they anticipated are buying sparingly. Plates have taken on new life and are not as weak as recently. Sheets and cold-rolled products are quiet. Movement of structurals and reinforcing bars is on a fair scale.

Steel warehouse activity in Pittsburgh has picked up during the past week or 10 days, after a slight shrinking. October tonnage at least equals the September movement, and in one or two cases exceeds that month. Prices are firm. Sheet orders are more numerous and in some cases tonnages are greater than can conveniently be accommodated. Sheet inquiries are going begging where warehouses stocks are depleted because mill deliveries are so much deferred. While demand for bars, plates and shapes is well sustained, requests for cold finished bars are fewer. Sheet copper dropped ¼c per pound last week.

Jobbing demand in the New York metropolitan jobbing district has slowed up somewhat during the past week. Galvanized sheets and shapes continue to move freely. The month just closed was better than September, in the experience of most jobbers. Prices are unchanged.

October was a satisfactory month for Buffalo iron and steel warehouses. Consumers purchased regularly throughout the month and the volume of business was well in excess of that for October 1925. Some warehouses had their best month's business since May. Prices held steady and inquiry indicated a good volume of business in November.

Distributors at St. Louis of iron and steel goods from stock report business holding up better than expected. While the general demand

(*Concluded on Page* 1197)

## Quotations in Cents Per Pound at Leading Market Centers

### STEEL BARS

| | |
|---|---|
| Boston | 3.265c |
| Buffalo | 3.30c |
| Chicago | 3.00c |
| Cincinnati | 3.30c |
| Cleveland | 3.00c |
| Detroit | 3.15c |
| Ft. Worth | 3.75c |
| Los Angeles | 3.30c |
| New York | 3.24c |
| Philadelphia | 3.00c to 3.20c |
| Pittsburgh | 2.90c |
| Portland | 3.00c |
| San Francisco | 3.30c |
| Seattle | 3.00c |
| St. Louis | 3.15c |
| St. Paul | 3.25c |
| Tulsa | 3.80c |

### IRON BARS

| | |
|---|---|
| Boston | 3.265 |
| Buffalo | 3.30c |
| Chicago | 3.00c |
| Cincinnati | 3.30c |
| Detroit | 3.15c |
| Ft. Worth | 3.75c |
| New York | 3.24c |
| Philadelphia | 3.00c to 3.20c |
| St. Louis | 3.15c |
| Tulsa | 3.80c |

### REINFORCING BARS

| | |
|---|---|
| Boston | 3.265 to 3.50c |
| Buffalo | 3.30c |
| Chicago, billet | 2.25c to 2.60c |
| Chicago rail steel | 2.00c |
| Cincinnati | 3.20c to 3.30c |
| Cleveland | 2.50c to 3.00c |
| Detroit | 3.15c |
| Ft. Worth | 3.75c |
| Los Angeles, C.L. | 3.05c |
| Los Angeles, L. C. L. | 3.30c |
| New York | 3.15c |
| Philadelphia | 3.00c to 3.15c |
| Pittsburgh | 2.50c to 2.60c |
| San Francisco, C. L. | 2.30c |
| San Francisco, L C. L. | 2.45c |
| Seattle | 3.00c |
| St. Louis | 3.15c |
| Tulsa | 3.80c |
| Youngstown | 2.50c to 2.60c |

### STANDARD STRUCTURAL SHAPES

| | |
|---|---|
| Boston | 3.365c |
| Buffalo | 3.40c |
| Chicago | 3.10c |
| Cincinnati | 3.30c |
| Cleveland | 3.00c |
| Detroit | 3.25c |
| Ft. Worth | 4.50c |
| Los Angeles | 3.20c |
| New York | 3.34c |
| Philadelphia | 2.75c to 3.20c |
| Pittsburgh | 3.00c |
| Portland | 3.10c |
| San Francisco | 3.30c |
| Seattle | 3.00c |
| St. Louis | 3.25c |
| St. Paul | 3.35c |
| Tulsa | 3.80c to 4.16c |

### PLATES

| | |
|---|---|
| Boston | 3.365c |
| Buffalo | 3.40c |
| Chicago | 3.10c |
| Cincinnati | 3.40c |
| Cleveland, ¼-inch and thicker | 3.00c |
| Cleveland, 3/16-inch | 3.225c |
| Detroit | 3.25c |
| Detroit, 3/16-inch | 3.45c |
| Ft. Worth | 4.50c |
| Los Angeles | 3.20c |
| New York (sheared and universal) | 3.34c |
| New York (floor) | 5.25c |
| Philadelphia | 2.75c to 3.20c |
| Philadelphia, 3/16-inch | 2.95c to 3.40c |
| Pittsburgh | 3.00c |
| Portland | 3.25c |
| San Francisco | 3.30c |
| Seattle | 3.00c |
| St. Louis | 3.25c |
| St. Paul | 3.25c |
| Tulsa | 3.80c |

### NO. 10 BLUE ANNEALED SHEETS

| | |
|---|---|
| Boston 3/16-inch | 3.915c |
| Buffalo | 3.80c |
| Chicago | 3.50c |
| Cincinnati | 3.60c |
| Cleveland | 3.25c |
| Detroit | 3.65c |
| Los Angeles | 4.00c |
| New York | 3.89c |
| Portland | 4.25c |
| Philadelphia | 3.50c |
| Pittsburgh | 3.40c |
| San Francisco | 4.00c |
| Seattle | 4.25c |
| St. Louis | 3.60c |
| St. Paul | 3.75c |
| Tulsa | 4.05c to 4.20c |

### NO. 24 BLACK SHEETS

| | |
|---|---|
| Boston | 5.10c |
| Buffalo | 4.30c |
| Chicago | 3.95c |
| Cincinnati | 4.05c |
| Cleveland | 3.80c |
| Detroit | 4.10c |
| Ft. Worth | 4.70c |
| Los Angeles | 5.00c |
| New York | 4.35c |
| Philadelphia | 4.35c |
| Pittsburgh | 3.95c |
| Portland | 4.90c |
| San Francisco | 4.90c |
| Seattle | 4.90c |
| St. Louis | 4.45c |
| St. Paul | 4.20c |
| Tulsa, No. 28 | 5.00c |

### NO. 24 GALVANIZED SHEETS

| | |
|---|---|
| Boston | 5.80c |
| Buffalo | 5.15c |
| Chicago | 4.80c |
| Cincinnati | 4.90c |
| Cleveland | 4.65c |
| Detroit | 5.05c |
| Ft. Worth | 5.90c |
| Los Angeles | 5.75c |
| New York | 5.10c |
| Philadelphia | 5.30c |
| Pittsburgh | 4.80c |
| Portland | 5.75c |
| San Francisco | 5.65c |
| Seattle | 5.75c |
| St. Louis | 5.25c |
| St. Paul | 5.15c |
| Tulsa, No. 28 | 6.00 to 6.31c |

### BANDS

| | |
|---|---|
| Boston | 4.015c |
| Buffalo | 4.05c |
| Chicago | 3.65c |
| Cincinnati | 3.95c |
| Cleveland | 3.65c |
| Detroit | 3.80c |
| Ft. Worth | 4.40c |
| Los Angeles | 4.05c |
| New York | 3.99c |
| Philadelphia | 3.75c to 3.90c |
| Pittsburgh | 3.60c |
| Portland | 4.25c |
| San Francisco | 4.15c |
| Seattle | 4.00c |
| St. Paul | 3.90c |
| Tulsa | 4.71c |

### HOOPS

| | |
|---|---|
| Boston | 5.50c |
| Buffalo | 4.05c |
| Chicago | 4.15c |
| Cleveland | 3.65c |
| Detroit | 4.30c |
| New York | 4.49c |
| Philadelphia | 4.00c to 4.25c |
| Pittsburgh | 4.50c |
| Seattle | 5.00c |
| St. Paul | 4.40c |

### COLD FINISHED STEEL

| | Rounds and hexagons | Flats and squares |
|---|---|---|
| Boston | 4.05c | 4.55c |
| Buffalo | 3.90c | 4.45c |
| Chicago | 3.60c | 4.10c |
| Cincinnati | 3.85c | 4.35c |
| Cleveland | 3.90c | 4.40c |
| Detroit | 3.85c | 4.35c |
| Los Angeles | 5.25c* | ..... |
| New York | 4.00c | 4.50c |
| Philadelphia | 4.00c | 4.50c |
| Pittsburgh | 3.60c | 4.10c |
| Portland | 5.00c* | ..... |
| San Francisco | 4.25c* | ..... |
| Seattle | 5.00c* | ..... |
| St. Paul | 3.85c | ..... |
| Tulsa | 4.66c | 5.16c |

*Rounds only.

### COLD ROLLED STRIP

| | |
|---|---|
| Boston, 0.100 inch, 500 lbs. lots | 6.15c |
| Buffalo | 6.25c |
| Chicago | 6.25c |
| Cincinnati | 7.15c |
| Cleveland, over 500 lbs. lots | 5.95c |
| Detroit | 6.20c |
| New York | 6.25c |
| Philadelphia | 6.25c |
| Pittsburgh | 6.30c |

### FOREIGN IRON AND STEEL

New York duty paid

| | |
|---|---|
| Swedish, hollow drill steel | 15.00c |
| Swedish iron bars round | 6.00c |
| Flats and squares | 6.25c |

### WELDED PIPE

Discounts from warehouse, New York City Standard Steel Pipe

### WROUGHT STEEL PIPE

| | Black | Galvanized |
|---|---|---|
| ⅛-inch butt | —28 | +21 |
| ¼ to ⅜-inch butt | —36 | — 3 |
| ½-inch butt | —46 | —29 |
| ¾-inch butt | —51 | —37 |
| 1 to 3-inch butt | —53 | —39 |
| 2-inch lap | —40 | —22 |
| 2½ to 6-inch lap | —48 | —35 |
| 7 and 8-inch lap | —44 | —17 |
| 9 and 10-inch lap | —38 | —14 |
| 11 and 12-inch lap | —37 | —12 |

### WROUGHT IRON PIPE

| | Black | Galvanized |
|---|---|---|
| ¼ to ⅜-inch butt | +44% | +78% |
| ½-inch butt | — 4 | +19 |
| ¾-inch butt | — 1 | + 9 |
| 1 to 1½-inch butt | —14 | + 6 |
| 2-inch lap | — 5 | +14 |
| 2½-inch lap | — 9 | + 6 |
| 3 to 6-inch lap | — 3 | + 6 |
| 7 to 12-inch lap | — 3 | +16 |

# Plates Lead on Coast

Shape and Plate Awards Give Largest Sales—Steel Buying Less Than Expected—Some Pipe Projects Closed

SAN FRANCISCO, Oct. 30.—(*By Air Mail*)—Although considerable new work is being planned, actual bookings of steel products have fallen off during the past week. Structural steel shape and plate awards were the only bright spots in the market this week. While business conditions generally on the Coast are good the volume of steel awards is below the figure that was expected at the beginning of second half.

### Pig Iron and Coke

Pig iron orders have involved small lots only and no large inquiries are current. It is understood one or two lots are enroute from Europe to apply against contracts made over a month ago. The Southern Pacific Co. has taken no action yet on its inquiry for 1000 tons of foundry coke.

## Coast Pig Iron Prices

| | |
|---|---|
| Utah basic | $25.00 to 26.00 |
| Utah Foundry | 25.00 to 26.00 |
| •German | 24.25 |
| •Indian | 25.00 |
| •Dutch | 22.00 |

•C.i.f. duty paid.

German foundry coke is being quoted at about $13 to $13.50 a ton.

### Bars, Plates and Shapes

Soft steel bar buying continues to be confined to unimportant lots and with the exception of the Western Harvester Co.'s inquiry for 600 tons, action on which has not yet been taken, no large inquiries are up for figures. Concrete bar tonnage dropped during the week and awards all included lots of less than 100 tons. Pending business is of fair proportions, the total exceeding 5500 tons. W. S. Wetenhall Co. is low bidder on 300 tons for a high school at Richmond, Calif., and Badt-Falk is low on 200 tons for the Hearst molder school in San Francisco. During the past week approximately 300 tons of foreign bars, flats and rounds, 100 tons of beams and 200 tons of 90-pound rail have arrived in port.

The plate market was the most active of the week, over 2000 tons being awarded. Washington Water Power Co., Spokane, has placed a pipeline with the Puget Sound Machinery Depot, Seattle, involving 1200 tons and 500 tons for surge tanks with the Chicago Bridge & Iron Co. A pipe-line for the La Mesa, Lemon Grove and Spring Valley irrigation district, La Mesa, Calif., calling for 325 tons of riveted material, was taken by the Lacy Mfg. Co., Los Angeles. Pending business calls for close to 14,000 tons. Specifications for a pipe-line at Yakima, Wash. will be out about Nov. 5. This project will require 6000 to 10,000 tons. No action has yet been taken on the Associated Oil Co.'s inquiry for 620 tons for two 80,000-barrel tanks. It is expected an award will be made within a few days on the Vancouver, B. C., pipe-line calling for 1100 tons. Prices continue firm at 2.30c c.i.f. as a minimum.

Demand for structural steel shapes is fair and much new work is in sight. A number of small awards were placed during the week, the total aggregating about 1000 tons. Included among these were 255 tons for the Callahan building, San Francisco, booked by the Pacific Rolling Mill Co., 200 tons for crane runways for the Finknind-Guild Lumber Co., California City, booked by the same fabricator, 190 tons for the Baby hospital, Oakland, placed with the California Steel Co., and 170 tons for an apartment in San Francisco awarded to the Herrick Iron Works. Only one new inquiry developed during the week. This project calls for 400 tons for a powerhouse in Alaska for the Fairbanks Exploration Co. Pending business exceeds 17,000 tons. Prices continue firm at 2.35c c.i.f.

### Other Finished Material

Awards of cast iron pressure pipe during the week totaled 400 tons, the American Cast Iron Pipe Co. and Crane Co. securing 285 tons and 105 tons respectively of 2-inch pipe for Los Angeles. Other awards involved lots of less than 100 tons. Pending business calls for about 2800 tons. New inquiries include 335 tons for Wenatchee, Wash., 300 tons for Shelton, Wash., 142 tons for Ventura county, Calif., and 108 tons for San Diego. Crane Co. booked about 500 tons of Matheson joint pipe for the La Mesa, Lemon Grove and Spring Valley irrigation district at La Mesa, Calif. Bolinas, Calif., who received bids on various types of pipe, placed 160 tons of 4 and 6-inch standard pipe with the Pacific Pipe Co.

Movement of out-of-stock material is about equal to that of last month, all lines being fairly active. Prices remain unchanged in both the San Francisco and Los Angeles districts.

## Soft Coal Output Gains

(*Concluded from Page* 1160)

responding week last year. The gain over the week ended Oct. 16 was 548,000 tons, according to the bureau of mines. For 1926 to date bituminous coal output has totaled 447,312,000 tons, against 404,767,000 in the like period of 1925. In the similar period of 1923 production was 447,982,000 tons and in 1920 it was 464,058,000 tons.

Beehive coke output in the week ended Oct. 23 declined 1000 tons from the preceding week, being an even 200,000 tons, with a daily average of 33,000 tons. In the same week of 1925 it was 224,000 tons. For the year to date beehive coke production has totaled 9,650,000 tons; last year it was 7,890,000 tons.

## Coal, Coke Pay Advance Is General

Practically every coal and coke interest in the Connellsville and adjacent regions has advanced wages within the past week. The lead was taken by the Pittsburgh Coal Co., as stated in IRON TRADE REVIEW of Oct. 28, in going to a scale approximately 5 per cent above the Jacksonville agreement. A majority of advances went into effect Nov. 1. The Frick interest has made no change, having been paying substantially the Jacksonville level, and it is to the so-called Frick 1922 scale that most independent cokemakers have gone.

Among independent cokemakers who on Nov. 1 adopted the Frick scale are the Hillman Coal & Coke Co., Washington Coal & Coke Co., W. J. Rainey properties, Consolidated Coal & Coke Co., Buckeye Coal & Coke Co., Pittsburgh Steel Co. and Crucible Steel Co. The Valley Camp Coal Co., Wheeling W. Va., has raised wages 30 per cent. Most interests in Greene and West Moreland counties posted the Frick basis Nov. 1. Some small independents with low-priced contracts on their books are said to be hesitating.

In going to the Frick scale most producers have boosted wages an average of 80 cents per day. The new Pittsburgh Coal Co. scale gives pushers $6.25 per day, trimmers $6.75, cleaners $6.50, dumpers $7, loading machine coal 81 cents per ton, pick mining $1.18 per ton, drivers $7.75, motormen $7.85, timbermen $7.75 and other classes in proportion.

The Pittsburgh company is about to start two additional mines—Montour No. 4 and Arnold No. 2—making 14 nonunion ones all told. Twenty-five per cent more men are employed by the company than a week ago. Its October production was 307,905 tons greater than any month since its mines were opened on a minimum basis.

## Corporation Issues New Book On Ore Analysis

A third edition of the book describing in detail methods of the chemists of the United States Steel Corp. for sampling and analyzing iron and manganese ores has been published by the Carnegie Steel Co. The supply of the second edition was exhausted in 1924 and demand for the book was so general that a revision was undertaken by five chief chemists of corporation subsidiaries, a sixth expert in handling and grading of ores acting as chairman, and a seventh to edit the work of the committee. The third edition contains 148 pages, with many illustrations.

The principal object of the corporation in issuing the book to the trade is to improve and standardize methods, to remove discrepancies often appearing in the results reported from different laboratories on the analysis of the same ore. An improvement in standard practice has been noted since the publication of the first edition. Another purpose is to give to chemists newly undertaking the work as much knowledge as possible, based on general experience. Standard practice is outlined, and the reasons therefore are given, but possible avenues of new research also are suggested.

## Pig Iron Market Strong

(*Concluded from Page* 1183)

market actively it will be with higher quotations. While $19.50, base, furnace, for delivery in Michigan, and $19 for delivery in western Ohio and Indiana represented the last offers from a lake producer before the coal and coke flurry developed, the company indicates that it will not consider less than $20 for Michigan and $19.50 elsewhere. A Michigan melter is reported to have paid $21, base, furnace, for a moderate size tonnage for first quarter, where the freight was in favor of the seller booking the order. Quotations at $19.50, base, furnace, or $20, delivered in the Cleveland switching area, are out on some small lots for local consumption. One Cleveland maker has advanced its price to $20, furnace for local delivery, and also claims to have obtained this price on some sales in nearby districts.

**Chicago, Nov. 2.**—While sales of northern No. 2 foundry and malleable are at the rate of the past few weeks, inquiry has been stimulated by the export of coking coal to England. Spot selling for fourth quarter maintains an even keel. The October total sales probably will aggregate a 15 to 20 per cent increase over September. October shipments indicate little gain over the preceding month. The slump in automotive activity is being reflected in the melt, sales and inquiries in Michigan territory having receded. Northern Illinois and southern Wisconsin foundries are showing increased interest, several contracts for foundry iron for early shipment, involving 300 to 1000 tons, having been closed. Important inquiry also has developed from this district. Charcoal iron is more active in this territory, and special low phosphorus iron is reported quoted at $31.50 to $32.50, delivered Chicago.

**Cincinnati, Nov. 2.**—Pig iron prices are firmer, despite the fact the market is quiet. A leading producer in the Ironton district is asking $20.50, furnace, for No. 2 foundry for prompt shipment and $20 for remainder of the year. Globe Furnace Co., Jackson, O., has advanced its silvery schedules $1 for remainder of the year and is not interested in first quarter business at present. Jackson County Iron & Steel Co. is expected to follow. Link-Belt Co., which a week ago bought 2000 tons of malleable for its Indianapolis plant, has placed an order with a local seller for another 1000 tons. Anderson Stove Co., Anderson, Ind., is reported to have bought 1000 tons of northern foundry. Inquiry pending does not exceed 5000 tons for all grades. Wagner Mfg. Co., Sidney, O., wants 500 tons of northern foundry for first quarter, while the Ross-Meehan Foundries, Chattanooga, Tenn., still is inquiring for 300 tons of malleable. The southern situation is unchanged with sales light and prices firm at $20, Birmingham, for Alabama and Tennessee grades.

**St. Louis, Nov. 2.**—The pig iron market continues fairly active and the coke situation has given rise to talk of possible higher prices for iron. The total of sales during the past several days was 13,000 to 14,000 tons, and inquiries pending amount to about 18,000 tons. The St. Louis Coke & Iron Corp. sold 11,000 to 12,000 tons of foundry iron for this and first quarter. The largest single sale was 3000 tons to a nearby Illinois melter. Some small lots of southern iron were placed here, and approximately 800 tons of northern iron. The largest inquiry is for 10,000 of foundry iron for delivery in this and the first quarter to a specialty maker with plants in Illinois and Iowa. Prices on 5000 tons are being asked by an Illinois melter for delivery through all of 1927. The leading local producer is strong at $21 to $21.50, f.o.b. Granite, City. No. 2 southern is steady at $20, Birmingham, and Chicago at $21, furnace.

**Birmingham, Ala., Nov. 2.**—The pig iron market is firm at $20, base, Birmingham, for this quarter. Inquiry for first quarter has not developed, and the price for the delivery is indefinite. Sales equal output.

**Philadelphia, Nov. 2.**—Pig iron buying is improving as consumers appreciate the significance of the fuel situation. Prices are advancing rapidly. Eastern Pennsylvania foundry iron now is $22 to $22.50, base, furnace, with indications that $22 will soon disappear. None of the eastern furnaces is seeking business, all having good order books and three interests are practically out of the market. The Mystic furnace again sold some tonnage in the past week for delivery to Delaware river points and Baltimore, making a total of about 5000 tons booked in this district. Demand for low phosphorus iron is heavy, with sales of about 10,000 tons of this grade in the past week. The Bethlehem Steel Co. will divert its Steelton furnace output to copper bearing low phosphorus about Nov. 15. Basic is featureless. It is believed this grade is not available now under $22, furnace. Many pipemakers are negotiating. The largest pig iron consumers now in the market include R. D. Wood & Co., Textile Machine Co., Midvale Co., American Engineering Co. and Salem Brass & Iron Co.

The Colonial Iron Co. expects to bank or blow out its furnace at Riddlesburg, Pa., soon.

## Warehouse Sales Fall

(*Concluded from Page* 1195)

shows less animation than heretofore, the movement of most lines is good, and early reports indicate that the October total will compare favorably with that of the preceding month, and will exceed October, 1925, by a good margin.

Some improvement in the movement of wire and wire products to the country has developed during the past ten days. Fencing is considerably better demand than a month ago, and some future ordering is reported for woven material.

Demand for warehouse products at Detroit is satisfactory. While tonnage moving is not as heavy as 30 days ago, it is steady and shows considerable increase over last year.. Automobile manufacturers continue to buy in quantity for immediate requirements. Operators look for a continuation of good business until the December inventory period.

Jobbers at Philadelphia report steel bar business greater in October than in September. Otherwise the month just ended did not show much change. Indications are that the average steel bar warehouse price in October was somewhat under September, but the quotation range remains unchanged.

Cleveland warehouse buying continues spotty. Generally October sales totals were smaller than September. No alteration in price levels for local delivery are noted but gradual stiffening in Pittsburgh competitive territory continues. Weather and seasonal effects have cut into the sheet trade of some jobbers although one distributor claims unusually good sales in this product recently.

In the Chicago territory October and September practically were on a par so far as sales volume is concerned. The past week has seen a decrease in the price of boiler tubing, which is not moving satisfactorily. Sheets, especially galvanized, are active, as are bars and shapes. Plates show firmness.

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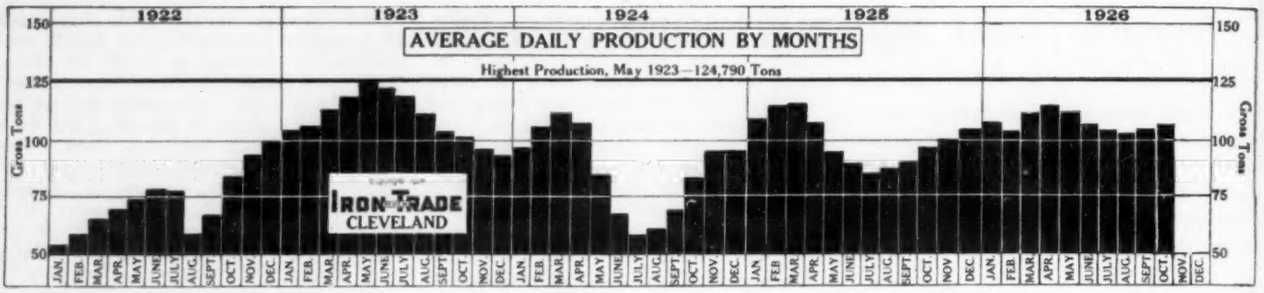
Effects of sulphur, phosphorus, bismuth, antimony, arsenic and tin in iron were not known until 1740. The effects of titanium, tungsten and chromium were made known about 1812.




# Iron Output Shows Further Gain

MAKING a gain of nearly 2000 tons per day, production of coke pig iron in October continued the upward swing commenced last month and rose to a level which was the highest since last June. Statistics collected largely by wire from the country's blast furnaces also show active stacks to total 218, which is a gain of two over the 216 operating on the last day of September.

Pig iron made in October totaled 3,321,177 gross tons, which compared with the 3,163,269 tons of September, was an increase of 157,908 tons. October had 31 days against 30 in September. On an average daily basis, October's output represented 107,134 tons per day, an improvement of 1692 tons per day, or 1.6 per cent over the 105,442-ton daily rate of the preceding month.

For the first ten months of 1926, production totals 32,760,745 tons, or 90.3 per cent of the 1925 full year production of 1925 or 36,370,404 tons. The comparison also reveals that this year's output is practically one full month ahead of last year.

Active furnaces on Oct. 31 totaled 218, against 216 on Sept. 30. With 373 serviceable furnaces in the country, this represented 58.5 per cent of activity in October. During the month 5 merchant furnaces were blown in and 3 blown out or banked. Of the nonmerchant class, 5 were blown in and 5 blown out.

The number of serviceable stacks in the country was increased from 371 to 373 in October by the placing in operation for the first time of two new furnaces. One was the Granite City, Ill., B furnace of the St. Louis Coke & Iron Co. which blew in on Oct. 16 and the other was the No. 1 Betty furnace of the Central Furnace Co., Massillon, O. This unit became active Oct. 28.

Stacks blown in during October were: In Ohio: Belfont, Belfont Steel & Wire Co.; No. 1 Betty, Central Furnace Co. In Pennsylvania: Marietta, Lavino Furnace Co.; Palmerton No. 1, New Jersey Zinc Co.; one Steelton, Bethlehem Steel Co. In Alabama: Woodward No. 3, Woodward Iron Co.; Bessemer No. 1, Tennessee Coal, Iron & Railroad Co. In Michigan: Henry, Ford Motor Co. In Illinois: Granite City B. St. Louis Coke & Iron Co.; Gary No. 8, Illinois Steel Co.

Stacks blown out during the month were: In Ohio: One Ohio and two Carrie, Carnegie Steel Co. In Pennsylvania: Sheridan, Lavino Furnace Co.; Cambria J, Bethlehem Steel Co. In Alabama: Vanderbilt Nos. 1 and 2, Woodward Iron Co. In Illinois: Gary No. 4, Illinois Steel Co.

## Active Blast Furnaces

| | In blast | Total | Per Cent |
|---|---|---|---|
| October | 218 | 373 | 58.5 |
| September | 216 | 371 | 58.2 |
| August | 215 | 372 | 57.8 |
| July | 217 | 372 | 58.4 |
| June | 220 | 372 | 59.1 |
| May | 229 | 376 | 60.9 |

### MONTHLY PRODUCTION

| | 1926 | 1925 | 1924 |
|---|---|---|---|
| January | 3,319,789 | 3,372,207 | 3,015,489 |
| February | 2,923,850 | 3,214,067 | 3,073,619 |
| March | 3,458,171 | 3,571,422 | 3,465,389 |
| April | 3,438,805 | 3,211,235 | 3,226,107 |
| May | 3,477,820 | 2,933,907 | 2,619,986 |
| June | 3,232,478 | 2,679,045 | 2,022,836 |
| Total 1st half | 19,850,913 | 18,981,883 | 17,423,417 |
| July | 3,224,663 | 2,665,262 | 1,783,457 |
| August | 3,200,723 | 2,707,171 | 1,882,986 |
| September | 3,163,269 | 2,725,885 | 2,053,617 |
| October | 3,321,177 | 3,017,889 | 2,461,727 |
| November | ..... | 3,023,257 | 2,154,979 |
| December | ..... | 3,249,057 | 2,956,389 |
| Total 2nd half | 12,909,832 | 17,388,521 | 13,653,155 |
| Grand total | 32,760,745 | 36,370,404 | 31,076,572 |

### AVERAGE DAILY PRODUCTION

| | 1926 | 1925 | 1924 | 1923 | 1922 |
|---|---|---|---|---|---|
| Jan. | 107,089 | 108,781 | 97,273 | 104,136 | 53,090 |
| Feb. | 104,423 | 114,788 | 105,987 | 106,925 | 58,220 |
| Mar. | 111,554 | 115,207 | 111,787 | 113,664 | 65,674 |
| Apr. | 114,627 | 107,041 | 107,537 | 118,210 | 69,005 |
| May | 112,187 | 94,642 | 84,515 | 124,790 | 74,495 |
| June | 107,749 | 89,301 | 67,427 | 122,262 | 78,748 |
| July | 104,021 | 85,976 | 57,531 | 118,860 | 77,517 |
| Aug. | 103,249 | 87,328 | 60,741 | 111,254 | 58,408 |
| Sept. | 105,442 | 90,862 | 68,454 | 103,917 | 67,466 |
| Oct. | 107,134 | 97,351 | 79,419 | 101,375 | 84,827 |
| Nov. | ..... | 100,775 | 83,832 | 96,373 | 94,870 |
| Dec. | ..... | 104,808 | 95,367 | 93,952 | 99,468 |
| Ave. | 107,765 | 99,645 | 84,908 | 109,659 | 73,563 |

### DIVISIONS OF PRODUCTION

| 1925 | Merchant | Non-merchant | Spiegel | Ferro-manganese | Other ferro |
|---|---|---|---|---|---|
| Jan. | 659,256 | 2,712,951 | 5,418 | 23,564 | 956 |
| Feb. | 661,415 | 2,552,652 | 4,910 | 19,796 | 848 |
| Mar. | 736,284 | 2,835,138 | 5,449 | 24,422 | 877 |
| April | 689,162 | 2,522,073 | 5,341 | 21,448 | 799 |
| May | 605,347 | 2,328,560 | 5,294 | 22,717 | 298 |
| June | 563,782 | 2,115,263 | 4,972 | 19,834 | ..... |
| July | 609,741 | 2,055,521 | 5,074 | 16,614 | ..... |
| Aug. | 588,330 | 2,118,841 | 4,940 | 18,818 | ..... |
| Sept. | 569,219 | 2,156,666 | 5,162 | 18,381 | 140 |
| Oct. | 606,092 | 2,411,797 | 5,071 | 21,472 | 1,544 |
| Nov. | 638,214 | 2,385,043 | 6,370 | 27,202 | 1,665 |
| Dec. | 664,681 | 2,584,376 | 7,746 | 25,881 | 1,883 |
| Total | 7,591,523 | 28,778,881 | 65,747 | 260,149 | 9,010 |
| 1926 | | | | | |
| Jan. | 724,946 | 2,594,843 | 7,746 | 32,924 | 1,607 |
| Feb. | 622,121 | 2,301,729 | 7,084 | 22,309 | 1,464 |
| March | 733,321 | 2,724,850 | 7,339 | 24,064 | 1,942 |
| April | 779,310 | 2,659,495 | 7,051 | 24,134 | 1,593 |
| May | 797,539 | 2,680,281 | 6,990 | 22,979 | 1,704 |
| June | 734,823 | 2,497,655 | 5,864 | 25,378 | ..... |
| July | 758,166 | 2,466,497 | 3,699 | 26,873 | ..... |
| Aug. | 682,017 | 2,518,706 | 4,372 | 23,557 | ..... |
| Sept. | 684,420 | 2,478,849 | 2,925 | 25,218 | ..... |
| Oct. | 713,353 | 2,607,824 | 6,314 | 18,573 | 516 |

### OCTOBER PIG IRON

| | No. of stacks | No. in blast last day of month Oct. | Sept. | Total tonnage made Merchant | Nonmerchant | —Totals— Oct. | Sept. |
|---|---|---|---|---|---|---|---|
| Ohio | 70 | 50 | 49 | 160,235 | 647,765 | 808,000 | 803,603 |
| Pennsylvania | 130 | 74 | 75 | 134,735 | 1,005,088 | 1,139,823 | 1,068,116 |
| Alabama | 34 | 23 | 23 | 103,947 | 145,486 | 249,433 | 230,187 |
| Virginia | 17 | 2 | 2 | 7,503 | ..... | 7,503 | 6,687 |
| New York | 26 | 15 | 15 | 89,150 | 123,515 | 212,665 | 210,952 |
| New Jersey | 3 | 0 | 0 | ..... | ..... | ..... | ..... |
| Illinois | 26 | 18 | 17 | 110,949 | 215,678 | 326,627 | 303,813 |
| Colorado | 5 | 3 | 3 | | | | |
| Indiana | 18 | 14 | 14 | 38,858 | 367,838 | 406,696 | 392,994 |
| Maryland | 6 | 5 | 5 | | | | |
| Wisconsin | 5 | 2 | 2 | | | | |
| Kentucky | 5 | 1 | 1 | | | | |
| Massachusetts | 1 | 1 | 1 | | | | |
| Tennessee | 13 | 1 | 1 | 22,907 | 48,358 | 71,265 | 57,373 |
| Utah | 1 | 1 | 1 | | | | |
| West Virginia | 4 | 2 | 2 | | | | |
| Michigan | 4 | 4 | 3 | | | | |
| Minnesota | 3 | 2 | 2 | 35,050 | 38,712 | 73,762 | 61,401 |
| Missouri | 1 | 0 | 0 | | | | |
| Texas | 1 | 0 | 0 | | | | |
| Spiegel and ferro—all states | .... | .... | .... | 10,019 | 15,384 | 25,403 | 28,143 |
| Totals | 373 | 218 | 216 | 713,353 | 2,607,824 | 3,321,177 | 3,163,269 |

# *Fabricators Get Fresh Viewpoint on Merit and Possibilities of Steel*

IN SEARCHING for a keynote to symbolize the fourth annual convention of the American Institute of Steel Construction held at White Sulphur Springs, W. Va., last week, none seems quite as appropriate as the institute's slogan, "Steel insures strength and security."

It is true that any one of four or five outstanding addresses delivered at this notable meeting might be characterized as sounding the keynote of the convention. President Kimbrough's address, advocating a united front in the campaign for steel; the impressive word picture of the merchandising possibilities of steel by E. St. Elmo Lewis; the masterful analysis of the advantages of steel in comparison with those of other materials presented by Dr. George F. Swain; the inspiring banquet address of Harvey Wiley Corbett on the future type of skyscraper; and several other papers—any or all of these might provide a suitable phrase to characterize the principal theme of the meeting.

Yet reduced to common terms, the conclusions of the authors of all of these addresses point in one direction. They left the impression on the minds of the 275 members and guests of the institute who attended that steel is a far better material than many had realized, that its superiority over other structural materials is so marked that a well organized campaign for broader markets should net worthwhile results, that its merchandising possibilities are far greater than is generally realized, and that steel not only "insures strength and security" but is also possessed of numerous other advantages not enjoyed by any of its competitors or substitutes.

The convention was marked by several significant decisions on the part of the board of directors. A limited advertising campaign was authorized to include a number of trade, professional and business papers and one periodical of general circulation. Support for research in the fireproofing of structural steel was also given.

Considerable attention was given to design and construction of buildings in regions where windstorms and tornadoes are prevalent. Definite proposals for investigation and study of wind bracing were made.

Possibilities in the application of welding to the fabrication of structural steel were outlined and a debate was staged in which the merits of welding and riveting were discussed. The question of striving for better architectural design in bridges was discussed, as was also the possibility of effecting economies in the design of structural steel buildings.

Several speakers presented papers proving conclusively that the danger of corrosion to structural steel is negligible if proper precautions are taken against certain well known conditions.

# *Score Hot Steel Industry for Neglecting Markets*

FOR the first time in the history of the institute, responsible officers of the organization openly scored the rolling mills for their attitude toward the fabricating industry.

This denunciation was most marked in the opening session when C. Edwin Michael, Virginia Bridge & Iron Co., Roanoke, Va., paused in his address of welcome to utter the following:

"The local companies have an investment of capital in plant equipment, in stocks for steel, for prompt fabrication and delivery. They employ executive engineering and sales talent, and their activities undoubtedly develop markets for structural steel. On many local projects of modest proportion, they are of necessity required to promote the use of steel and furnish designs with their proposals. It should be recognized by rolling mills that where these local concerns have competent organizations and equipment to serve their respective communities, their competition should be limited to other fabricators desiring to serve that community.

"They are frequently discouraged to find their markets demoralized by competition from the rolling mills. Local distributors of other commodities, so far as the speaker is aware, is not subjected to such competition.

"The published price of rolling mills warehouse steel today in six cities is approximately $20 per ton over the published mill price, plus freight. The fabricators who also carry stocks of steel in their several localities, can readily understand that these warehouse prices reflect the cost of selling and handling, waste in cutting, interest on value of steel always carried and cost of plant equipment. These same costs obtain in the distribution of the steel stocks out of the fabricating plants. It is unethical for the rolling mills to sell their products for shipment from the mills to consumers in a given territory where fabricators carry stocks, at the same or less prices than charged the fabricator who buys in wholesale quantities for distribution in that same territory."

This point was again emphasized in the address of the president, J. L. Kimbrough, Indiana Bridge Co., Muncie, Ind. Mr. Kimbrough said:

"It is an unfortunate fact that the mills have always dominated the structural steel market through their large

## New Officers

**President**
W. M. Wood
Mississippi Valley Structural Steel Co., Decatur, Ill.

**First Vice President**
C. Edwin Michael
Virginia Bridge & Iron Co., Roanoke, Va.

**Second Vice President**
C. M. Denise
McClintic-Marshall Co., Pittsburgh

**Treasurer**
George E. J. Pistor
Hay Foundry & Iron Works, New York

**Executive Director**
*Charles F. Abbott, New York

**Chief Engineer**
*Lee H. Miller, Cleveland

**Directors**
(Three-year terms)
*H. B. Hirsch, Belmont Iron Works Philadelphia
*N. W. Warren, Dominion Bridge Co., Ltd., Montreal
*L. L. Gadd, Levering & Garrigues Co., New York
*W. S. Mosher, Mosher Steel & Machinery Co., Dallas, Tex.
*Charles N. Fitts, New England Structural Co., Boston
H. A. Fitch, Kansas City Structural Steel Co., Kansas City, Kans.

*Re-elected

*Attendance at the fourth annual convention at White Sulphur Springs totaled nearly 300 members and guests, many of whom are shown in the above illustration*

fabricating plants. It is a situation that is economically unsound and has militated always against a constructive development of the fabricating industry. This mill domination and accompanying indifference to the problems of marketing structural steel is responsible for the shrinkage of fabricated structural steel from the market until within the past two years.

"The mills of the hot steel industry compete among themselves for the sale of structural shapes. Some of them compete with each other as well as with members of the structural steel industry in the fabrication and erection of structural steel. Generally speaking, this competitive influence on the part of the mills is destructive.

"The competition of the hot steel industry with its logical distributor of structural shapes has unquestionably discouraged the efforts of the individual fabricator and retarded the development of the structural steel industry.

### Hits at Steel Corporation

"While commanding a dominant position in the fabricating industry, the mills have failed in leadership and effort to advance the industry. The logical leader not only has failed to function as such, but when the minority of interest seeing the need for a larger public service and an extension of markets, has accepted the responsibility and pointed the way, the leading interests again have failed to participate in a measure commensurate either with their responsibilities or benefits."

Mr. Kimbrough declared that in making this statement he was not unmindful or unappreciative of the financial and moral support that certain mill interests have given the institute but he declared that in general the steel mills have woefully neglected the structural steel market. He emphasized that fact that the great problem confronting the steel industry is that of marketing which contemplates publicity, advertising, merchandising and selling, practiced in accordance with modern ideas.

# *Steel Is Material Freest from Human Error*

PERHAPS the outstanding feature of the convention was the thorough analyses of the various building materials presented by numerous authorities, which served to throw steel into bold relief as the premier structural material.

The principal address on this subject was entitled "Steel for Strength and Security" by Dr. George F. Swain, Harvard university. Dr. Swain stated that the principal structural materials are wood, stone, burnt clay products, concrete, reinforced concrete and steel.

The desirable characteristics for a structural material include economy, durability, strength, elasticity, resilience, toughness, abundant tensile strength, usability at all times and seasons independent of the weather, constancy with no physical or chemical changes, absence of initial stresses and reliability or freedom from risk if proper care is taken.

Dr. Swain emphasized the fact that steel is a finished product and that it has in a higher degree than any other material all of the foregoing desirable qualities.

### Concrete Made on Job

"On the other hand," said Dr. Swain, "concrete is not a finished product, but is made on the job." "Moreover," he said, "it is not really finished until after it is in the structure beyond recall."

He also compared the conditions under which steel and concrete are made. He pointed out the expert workmanship and supervision obtaining in the steel industry and showed that every step of the steelmaking process is subject to close control. "The making of concrete," he declared, "involves few if any of these safeguards."

Dr. Swain also dwelt at length on the effect of water on finished concrete. He said that when concrete is exposed to water it expands and when it is in air it contracts. For this reason most concrete is constantly in the process of contracting or expanding and this action causes disintegration. He cited dozens of cases of concrete failure and quoted many authorities on concrete who apparently are aware of the shortcomings of that material.

Dr. Swain left his audience in no doubt as to his belief that the Portland Cement association's slogan "Concrete for Permanence" is not justified.

Another staunch advocate of steel was found in John A. Crook, Denver Steel & Iron Works Co., Denver, who spoke on "Structural Steel and Its Relation to Competition." He outlined briefly his long experience with concrete and commented on the excessive weight of this material compared with its strength; stressed the danger incurred in the shipment of cement and the necessity of protecting it from the weather; commented on the high cost of shipment and the waste in building its excessive foundations for the terrific dead

loads; and pointed out that concrete structures cannot be moved from place to place.

Mr. Crook spoke feelingly on the lack of permanence of concrete and cited numerous illustrations. He showed how difficult it is to repair concrete and emphasized the difficulties encountered due to uncertain weather conditions, lack of proper supervision, etc.

### Steel Meets Many Needs

A third crusader for steel was Bradley Stoughton, Lehigh university, Bethlehem, Pa. Professor Stoughton briefly outlined the various building materials of stone, wood and metals. He said that metals proved the best because they are the simplest. No material, he said, is more homogenous than metals, and because of this they are free from human errors.

Commenting on steel, he emphasized its adaptability stating that it can be made hard or soft, magnetic or nonmagnetic, and ductile or brittle at will.

He then outlined briefly the various steps in the making of iron and steel, showing how accurately each process is controlled. He then enumerated a number of exclusive properties of steel including high strength, ductility, the fact it is scientifically made by experts and the uniformity of steel which can be determined before it is placed into use.

Professor Stoughton mentioned structural alloys of aluminum and magnesia and said that only price saves steel from competition from these alloys. He urged the steel industry to engage in research in order to keep abreast of its technical problems.

A fourth paper in which the merits of steel were emphasized was that by Milo S. Ketchum, University of Illinois, Urbana, Ill. Dean Ketchum said that structural steel is made under careful manufacturing conditions and has physical properties that are more definite than are the physical properties of any other material. In addition, it more nearly conforms to the conditions assumed in the development of the theory of elasticity than does any other structural material. He spoke at length on the properties desired in steel and the effect of its chemical composition on these properties.

### Tests Light Weight Beams

He touched on design, the application of welding, the question of fireproofing and concluded with the results of exhaustive tests performed on light weight beams recently developed by the Jones & Laughlin Steel Corp. These tests showed that the material is uniform, and the sections well proportioned and that these beams may be designed and their safe loads may be calculated by means of the standard formulas used by engineers for standard I-beams.

# *Argue Merits of Welding and Riveting Steel*

INTEREST in welding cropped out in many of the papers presented during the convention. Dean Ketchum, whose address already has been mentioned, declared that rapid progress is being made in the welding of steel structures and several buildings of considerable size have been erected with welded connections. He stated that research investigations of welding structural steel would appear to have three different divisions, as follows:

1. An investigation of welded joints including a method of making field tests of welded joints.
2. An investigation of the physical, chemical and metallurgical phases of the problem, including a study of the weld and the material adjacent to the weld under different conditions of impact, secondary stress, repeated stress, over stress, etc.
3. An investigation of welding as applied to the fabrication and erection of articulated steel structures for bridges, buildings, and other framework.

### Comments On Welding

Commenting on the general adoption of welding, Dean Ketchum said: "The allowable stresses, details of design, methods of erection and other phases of steel structures with riveted connections are controlled by specifications that are the result of experimentation and experience in the shop and field and in service. While the tests and experience with welded structures would appear to indicate that welding has an important place in the fabrication and erection of steel structures, much study, investigation and experimentation will be necessary before welding can be generally adopted in place of riveting."

Owing to the amount of interest now being displayed in welding, an entire session was devoted to this subject. William Spraragen, National Research council, New York, spoke on "Fundamentals of Welding and Their Possible Application to Structural Steel."

### Describes Uses of Welding

Mr. Spararagen devoted the major part of his discussion to applications of welding in the fabrication of steel. He described and illustrated the welding of gas holders and their frames in Australia and the United States, welding of ships, car frames, pipe lines, smoke stacks, structural steel in buildings and a variety of other work.

He outlined certain advantages that he said may be expected of welding as applied to structural jobs, but declared that the best results would be obtained if designs specially suited to welding were used.

He showed by chart and table of data tests of welded and riveted structural members in which the strength of the former exceeded that of the latter.

A. F. Jensen, Hanna Engineering

## Program for Next Year Is Comprehensive

THE future program of the institute, if controlled by the estimated income for 1927, will involve the following activities:

Furtherance of the adoption of standard specification;

Enlargement of the use of "Code of Standard Practice";

Publication of 20 additional sales manual bulletins;

Distribution of 20,000 copies of the final edition of the *Standard Handbook*, and the compilation of the additional data;

Distribution of service bulletins;

Continuation of educational meetings;

Co-operation with technical schools and their students:

Attendance at meetings of technical committees and technical societies;

Extension of the use of standard signs;

Attention to traffic problems;

Organization, training, and supervision of a staff of field engineers;

Advertising in a limited number of publications;

Circulation of "Fabriquets";

Increased service to architects and engineers;

Introduction of a sales promotion program.—*From annual report of Charles F. Abbott.*

Works, Chicago, discussed welding as a competitor of riveting. He stressed the reliability of riveting and declared accurate data are available regarding every phase of the process.

Mr. Jensen quoted numerous authorities who cited cases of failures of welded structures, particularly pressure vessels such as boilers. He also stated that in many tests of welding, the operators have known the welds were for test purposes.

**Objects to Improper Use**

In conclusion, Mr. Jensen said, "We are not opposing welding for it has a useful field. In the interest of public safety we object to its improper and indiscriminate use."

A. M. Candy, Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. devoted his remarks chiefly to the work of the Westinghouse company and the erection of one of its buildings by welding. He illustrated recent tests and showed that when stressed to destruction the members failed outside of the welds. Particular emphasis was placed upon the claim that welding permits joining two girders to a column in such a way that they may be considered as a continuous beam.

Two built-up beams, one of welded members and one of riveted members, were placed on exhibition.

Discussion by fabricators in the hotel indicated a keen interest in welding, with opinion divided between eagerness to try the process and determination to hold to riveting until welding is better known.

One of the notable addresses of the convention was that on "Salesmanship and Broader Markets," by E. St. Elmo Lewis, Detroit. Because of the interest attracted by this paper, it is presented on pages 1161 to 1164 of this issue.

**Describes Florida Damage**

M. E. Smith, associate editor, *Engineering News-Record*, described damage done by the recent Florida storm. He showed illustrations indicating that gusts of wind or rather the intermittent character of the wind pressure is more to be feared than steady pressure. He declared that the disaster again emphasizes the need of greater knowledge of wind stresses and further study on wind bracing. He urged the weather bureau to report wind data in pounds per square foot as an aid in the study of the problem.

# *Corrosion of Structural Steel Easily Controlled*

CORROSION of structural steel was given much attention at this convention, as it had been the week before at the meeting of the American Iron and Steel institute.

Frank W. Skinner, New York, abstracted a long paper on the subject, in which he outlined the character of replies to a questionnaire he had submitted to hundreds of the leading architects, contractors and engineers of the country.

The concensus of opinion thus obtained may be summarized as follows:

1. Structural steel will not rust if propertly treated.
2. It has practically unlimited working life.
3. Rust in principal structures is caused by a limited number of specific conditions.
4. Certain parts of all structures are more susceptible than others to rust.
5. All structures can be protected from serious rust.
6. Electrolysis usually is negligible.
7. Rust can be removed after it has commenced.
8. Rust will not become dangerous without warning.
9. Steel is the most reliable of all materials.

**Care Insures Long Life**

Mr. Skinner declared that proper design, construction, protection, inspection, maintenance—including good painting and cleaning—and a reasonable attention to natural or artificially severe conditions such as salt air, continued fogs, acid fumes and corrosive liquids should insure for all steel structures a life that is practically unlimited by corrosion.

His paper was discussed by F. N. Speller, National Tube Co., Pittsburgh, who outlined many of the points included in his address the week before, which appeared on page 1104 of the Oct. 28 issue of IRON TRADE REVIEW.

Following a second talk by Mr. Speller, the convention passed a resolution asked the directors to authorize a study of the corrosion of structural steel.

Under the title, "Some Possible Economies in Steel Construction," C. R. Young, University of Toronto, Toronto, Can., outlined a number of changes and improvements in design which in his opinion would result in economies.

Briefly summarized, these opportunities lie in the following conditions:

1. Specified floor live loads for buildings in many cities are too high.
2. Recognition of the restraining value of riveted end connections of beams to girders would result in savings.
3. Due credit should be given to the reinforcing value of concrete encasement.
4. Rules in use for the reduction of live loads on columns of tall buildings are in many cases unduly severe.
5. Columns below the top story sometimes are designed for the apparent rather than the actual eccentric load.
6. Arbitrary limitation of the slenderness ratio of columns where the load is nominal causes waste.
7. Insufficient credit is given to the value of the outstanding legs of tension angles.
8. Recognition of the value of rivets in tension is due.
9. Wind stresses in tall buildings in the northern two-thirds of the continent are much below those calculated.
10. In the plane of rigid concrete floors, lateral bracing in bridges often may be safely omitted.

**Wants More Beauty in Bridges**

Dr. William J. Watson, Watson Engineering Co., Cleveland, exhibited numerous illustrations of steel and concrete bridges for the purpose of showing that beauty can be built into

## Future Buildings Can Be Higher Due To Steel

CHOICE of Harvey Wiley Corbett, of Helmle & Corbett, architects, New York, as principal speaker at the banquet proved fortunate.

Mr. Corbett spoke of the modern skyscraper as an exclusively American development, which has opened up new opportunities in design and has helped solve the problem of housing offices in congested cities.

He exhibited numerous photographs of New York's skyline and drawings of future buildings, as he expects them to be designed. He painted a word picture of structures 1000 feet high, with arcades at the street level to widen the lanes of vehicle traffic and with balconies for pedestrians. Elevated crossings will permit crossing from one side of the street to the other. Airplane landings were pictured on the higher buildings.

"Steel," said Mr. Corbett, "possesses the properties that would make such structures possible."

a bridge of steel as well or better than in bridges of other materials. He emphasized the necessity of considering the artistic phase of design more seriously than has been the general rule.

Owing to the absence of Rudolph P. Miller, New York, his paper "The Fireproofing of Structural Steel" was presented by his son.

Friday afternoon much of the final session was devoted to discussion of problems of the industry by members of the institute.

Horace G. Miller, Union Iron Works of Los Angeles, Los Angeles, referred to the brilliant record of the institute in the past three years. He declared ethics must be maintained on a high standard. Fireproofing, he said, is an important problem, inasmuch as at present the public believes that it is cheaper to build a fireproof structure of concrete than of steel.

### Discuss Fabricator's Problems

H. A. Fitch, Kansas City Structural Steel Co., Kansas City, Kans., declared the fabricating industry should make enough surplus profit to enable it to engage in necessary research. Reviewing business of the past year, he said it had been more prosperous because fabricators had been more intelligent. He suggested that the organization of local groups of fabricators has been of great value. He pleaded for better understanding between the mills and the fabricators.

W. S. Mosher, Mosher Steel & Machinery Co., Dallas, Tex., emphasized the need of better cost systems and outlined the folly of determining costs by guess. He declared the sales methods of the industry are susceptible to vast improvement.

Robert T. Brooks, Geo. A. Just Co., New York, reviewed high lights of the convention and briefly mentioned the work of the Structural Steel Board of Trade Inc., of New York.

A. A. Templeton, Associated Steel Fabricators of Detroit Inc., Detroit, urged institute members to crystallize its program into action. John W. Ogren, Central Fabricators' association, briefly described the activities of that group of fabricators in the Middle West.

# *Reports Show Institute Is Making Rapid Progress*

BUSINESS transacted during the course of the convention included the election of new officers and directors as outlined on page 1199. A biographical sketch of W. M. Wood, the new president, is published on page 1205 of this issue.

The annual report of Charles F. Abbott, executive director, showed that from Oct. 31, 1923, the membership of the institute has grown from 100 members to 210 members at the present time. He reported that with the exception of the mill interests, all but five or six fabricating concerns now are members of the organization.

Mr. Abbott outlined the achievements of the institute during the past year including the outside contacts of its officers and staff; the growth in the adoption of the institute's standard specifications by various cities; the increase in the use of the code of standard practice: the progress being made in the publication of its sales manual; the inauguration by the institute of a staff of field engineers; the greater use of signs on all-steel frame buildings under construction; and various other accomplishments. Mr. Abbott painted a picture of the future of the institute and emphasized the need of advertising, technical research and increased service to architects and engineers.

### Wants Light on Fireproofing

Lee H. Miller, chief engineer, devoted a liberal part of his report to the question of fireproofing steel. He declared that the question of what constitutes a fireproof steel building skeleton has never been properly answered. He read a proposed specification for fireproof construction and urged that immediate attention be given this important subject.

Mr. Miller also spoke on the subject of wind bracing, and urged that the U. S. weather bureau give wind data in pounds per square foot, rather than in miles per hour. He also spoke on the standardization of shapes, on the economies made possible by uniform practices and on the application of welding.

### Must Design for Welding

On this latter subject Mr. Miller declared: "For years we have been using welding with confidence and assurance. There is no record of the failure of a structural steel rivet in service. Before the engineering profession will accept welding, data must be collected which will enable the engineer to design with welding as the basis of construction. Methods must be devised which will permit engineer and purchaser to ascertain that the welds have been properly executed."

The traffic committee, of which M. T. S. Orner is chairman, reported on numerous interstate commerce commission cases it has investigated. The committee on better selling methods, headed by Karl E. Vogel, Omaha Steel works, Omaha, Nebr., recommended that the sales manual of the institute be completed, that a monthly magazine on structural steel be considered, that effort be made to interest students in structural steel, that the publicity campaign be continued and that the staff of resident engineers be augmented.

### Recommend Research

The committee on technical research, of which P. A. Blackwell is chairman, recommended that the institute's chief efforts in research be devoted to the application of welding, study of wind bracing, fireproofing of steel and protection of steel against corrosion.

### Entertainment Features

Entertainment features included a golf match, annual banquet, halloween party and motion pictures, the latter including "Men of Steel" and the "Story of Compressed Air."

The time and place of the next convention was left to the decision of a committee which is considering a number of proposed locations, including Hot Springs, Va., and Colorado Springs, Colo.

## Institute's Members Have Plants in 33 States

IN THE matter of membership, your officers have enrolled most of the structural shops of the United States and Canada, having at present 208 members, with approximately 300 plants, located in 33 States, the District of Columbia, and Canada; with an investment of approximately $200,000,000.00 capital; employing on an average about 26,000 wage earners and producing annually two and a half millions tons of structural steel. Surely this is a national representation with unlimited opportunities for service to the public.

This is said to represent 99 per cent of the structural steel production in this country exclusive of the mill interests.—*From the address of C. Edwin Michael.*

# More British Miners Return

## Average of 7000 Weekly Resuming Work—Breakdown of Six-Months Struggle Believed Near—Leaders Trying To Negotiate—Belgian Mills Book 70,000 Tons of Plates and Sheets—Entente Increasing Output

2-3 Caxton House, Westminster, S. W.1
European Headquarters,
IRON TRADE REVIEW.

LONDON, Nov. 2.—Indications continue to multiply that the British coal strike will be terminated by the voluntary return of the miners, and the council of the Trades Union congress is making further efforts to negotiate with the operators. An average of 7000 men are returning to the pits daily, the total number now at work being approximately 270,000. This force is sufficient to produce about 1,000,000 tons of coal weekly.

Executives of the miners' union have agreed to submit to the council Thursday a plan for district settlements, providing that it be embodied later in a national agreement on principles. The government is prepared to take part in the deliberations if wages and hours are discussed. Agreement on a coal embargo is doubtful.

In Nottinghamshire a majority of the striking miners are meeting to discuss a district agreement with the mine owners, and the formation of an independent workers' organization. The outcome of this meeting is considered problematical.

The position of the British steelworks is becoming more serious. Continental deliveries are slow. Richard Thomas & Co. are restarting eight mills partly with American coal.

Easier price tendencies are noted in the French and Belgian markets. Belgian mills are reported to have sold 70,000 tons of plates and sheets to British consumers recently. German steel producers report active business; a round tonnage of rails for South America being booked this week. The European steel entente is increasing production to a rate approximately 8,000,000 tons for the current quarter, due to the British crisis.

# British Coal Situation Is More Embarrassing

Office of IRON TRADE REVIEW,
Prince's Chambers, Corporation St.

BIRMINGHAM, Eng., Oct. 21.—(*European Steel Service*)—The coal position has becoming more embarrassing, the question of whether to buy being peculiarily difficult to answer.

The chief scarcity is in pig iron, the operating furnaces now being reduced to five, of which four are situated in Middlesbrough. No. 3 G. M. B. has further increased to £6 ($29.10) per ton; but stocks are sold out, and the prospective output has been contracted for weeks ahead. Engineering works in most districts are still at work on such pig iron as can be obtained, either from Middlesbrough or foreign sources. The unfortunate Birmingham ironfounder has to pay nearly £7 ($33.95) per ton for his pig iron, and the cost of his Westphalian coke is about £4 ($19.40) per ton. Germany has now almost a monopoly of the British coke market and is making an excellent harvest.

**Sterling $4.85**

Apart from the coal stoppage the number of trade disputes involving stoppages of work reported as be-

(*Concluded on Page* 1218)

# Current Iron and Steel Prices of Europe

| Dollars at Rates of Exchange, Nov. 1 | *British* Gross Tons U. K. Ports | | *French* Metric Tons Channel Ports | | *Belgium and Luxemburg* Metric Tons Channel Ports | | *German* Metric Tons Rotterdam or North Sea Port | |
|---|---|---|---|---|---|---|---|---|
| **Export Prices f. o. b. Ship at Port of Dispatch—By Cable** | | £ s d | | £ s d | | £ s d | | £ s d |
| **PIG IRON** | | | | | | | | |
| Foundry No. 3, Silicon 2.50-3.00 | $29.10 | 6 0 0* | $18.79 | 3 17 6 | $18.79 | 3 17 6 | $19.40 | 4 0 0 |
| Basic | 24.25 | 5 0 0 | 20.61 | 4 5 0 | 20.61 | 4 5 0 | 20.61 | 4 5 0 |
| Basic-bessemer | 26.68 | 5 10 0† | 16.98 | 3 10 0 | 16.98 | 3 10 0 | 18.19 | 3 15 0 |
| Hematite, Phosphorus 0.02-0.05 | 24.25 | 5 0 0 | 23.61 | 740* | ..... | .... | 21.34 | 4 8 0 |
| **SEMIFINISHED STEEL** | | | | | | | | |
| Billets | $32.74 | 6 15 0 | $25.46 | 5 5 0 | $25.46 | 5 5 0 | $24.25 | 5 0 0 |
| Wire rods | 43.65 | 9 0 0 | 28.49 | 5 17 6 | 28.49 | 5 17 6 | 27.89 | 5 15 0 |
| **FINISHED STEEL** | | | | | | | | |
| Standard rails | $37.59 | 7 15 0 | $29.10 | 6 0 0 | $29.10 | 6 0 0 | $29.10 | 6 0 0 |
| Merchant bars | 1.73c | 8 0 0 | 1.24c | 5 15 0 | 1.24c | 5 15 0 | 1.23c | 5 12 0 |
| Structural shapes | 1.46c | 6 15 0 | 1.22c | 5 12 6 | 1.22c | 5 12 6 | 1.18c | 5 7 0 |
| Plates, ship, bridge and tank | 1.68c | 7 15 0 | 1.35c | 6 5 0 | 1.35c | 6 5 0 | 1.27c | 5 15 0 |
| Sheets, black, 24 gage | 2.38c | 11 0 0 | 2.49c | 11 10 0 | 2.49c | 11 10 0 | 2.31c | 10 10 0 |
| Sheets, galvanized, 24 gage, corrugated | 3.79c | 17 10 0 | 4.20c | 2,800* | 5.07c | 3,900* | 3.74c | 17 0 0 |
| Bands and strips | 2.38c | 11 0 0 | 1.49c | 6 17 6 | 1.49c | 6 17 6 | 1.51c | 6 17 0 |
| Plain wire, base | 2.11c | 9 15 0 | 2.40c | 1,600* | 1.49c | 6 17 6 | 1.51c | 6 17 0 |
| Galvanized wire, base | 2.76c | 12 15 0 | 3.30c | 2,200* | 1.95c | 9 0 0 | 1.93c | 8 15 0 |
| Wire nails, base | 2.06c | 9 10 0 | 2.70c | 1,800* | 1.65c | 7 12 6 | 1.67c | 7 12 0 |
| Tin plate, base box 108 pounds | $ 5.46 | 1 2 6 | ..... | ..... | ..... | .... | $ 6.79 | 1 8 0 |

*Francs

| **Domestic Prices at Works or Furnace—Last Reported** | | | Francs | | Francs | | Marks | |
|---|---|---|---|---|---|---|---|---|
| Foundry No. 3 Pig Iron, Silicon 2.50—3.00 | $28.49 | 5 17 6 | $19.14 | 600(2) | $17.38 | 625 | $19.55 | 85 |
| Basic pig iron | 23.04 | 4 15 0 | 18.82 | 550(1) | 17.24 | 620 | 20.24 | 88 |
| Furnace coke | 12.13 | 2 10 0 | 6.19 | 194 | 6.53 | 235 | 4.95 | 21.50 |
| Billets | 32.74 | 6 15 0 | 24.72 | 775 | 21.82 | 785 | 26.47 | 119 |
| Standard rails | 1.79c | 8 5 0 | 1.35c | 900 | 1.27c | 975 | 1.46c | 140 |
| Merchant bars | 1.89c | 8 15 0 | 1.39c | 925 | 1.33c | 1,025 | 1.40c | 134 |
| Shapes | 1.68c | 7 15 0 | 1.31c | 870 | 1.30c | 1,000 | 1.37c | 131 |
| Plates, ship, bridge and tank | 1.89c | 8 15 0 | 1.46c | 975 | 1.53c | 1,175 | 1.55c | 149 |
| Sheets, black, 24 gage | 2.49c | 11 10 0 | 2.78c | 1,850 | 2.73c | 2,100 | 2.14c | 205 |
| Sheets, galvanized 24 gage, corrugated | 3.69c | 17 0 0 | 4.13c | 2,750 | 5.01c | 3,850 | 3.96c | 380 |
| Plain wire | 2.11c | 9 15 0 | 2.40c | 1,600 | 1.95c | 1,500 | 2.03c | 195 |
| Bands and Strips | 2.38c | 11 0 0 | 1.76c | 1,175 | 1.56c | 1,200 | 1.62c | 155 |

*Middlesbrough; †Scotch foundry iron; (1) Basic-bessemer; (2) Longwy. British export furnace coke £2 15s 0d ($13.34) f. o. b. Ferromanganese £15 10s 0d ($75.18) f. o. b. German ferromanganese £15 10s 0d ($75.18) f. o. b.

The equivalent prices in American currency are in dollars per ton for pig iron, coke, semi-finished steel and rails; finished steel is quoted in cents per pound and tin plate in dollars per box. British quotations are for basic open-hearth steel; French, Belgian, Luxemburg and German are for basic bessemer steel.

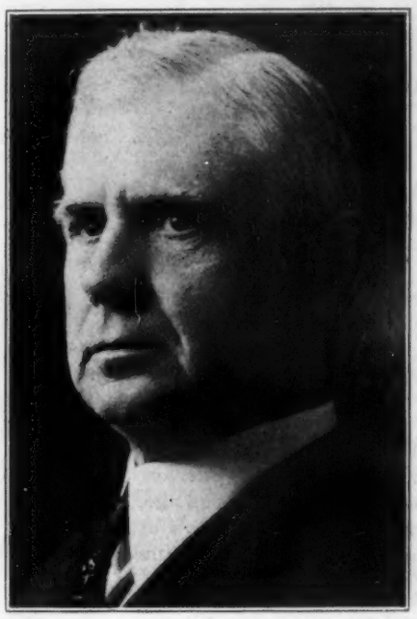
# Industrial Men in the Day's News

## W. M. Wood, Elected President, American Institute of Steel Construction

*THIRTY-FOUR years' service in the field of structural steel fabricating is the record which he carries into the leading position of his industry's association.*

*HE HAS taken an active part in organizations of fabricators and has been a firm advocate of constructive development. He is widely known as a leader along safe and practical lines.*

*BUSINESS and association work has not prevented him from taking an active part in civic affairs. He is an automobile enthusiast and an interested golfer.*



ACTIVE participation in the association work of the structural steel industry in much of his 34 years connection with that field has brought to W. M. Wood, president of the Mississippi Valley Structural Steel Co., Decatur, Ill., added recognition through his election to the presidency of the American Institute of Steel Construction at the convention of that association last week. Mr. Wood served on the directorate of the Structural Steel society, a middle western group, Bridge Builders society, which was an organization of large fabricators, and the National Fabricators, which was formed during the war to obtain economies and to further co-operation within the industry in that period.

When the American Institute of Steel Construction was organized, Mr. Wood was placed on the board of directors and was made a member of the executive committee. Later he was elected vice president and treasurer which office he held until his election at the recent annual meting.

Mr. Wood started his business career in the structural steel fabricating industry, joining the Indiana Bridge Co., Muncie, Ind., in 1892, immediately after completing his collegiate education at DePauw university, Greencastle, Ind. He served in the engineering and sales departments for ten years, having charge of structural steel and industrial building sales. In 1902 he associated with T. L. Blackburn, G. A. Caldwell and E. B. Tuler to form the Decatur Bridge Co. This organization built a plant at Decatur, Ill. Mr. Wood was chief engineer and treasurer of the new company. In 1918 Mr. Wood was elected president, succeeding Mr. Blackburn, who retired. In 1922 the name of the Decatur Bridge Co. was changed to the Mississippi Valley Structural Steel Co., the present title. Plants of the Christopher & Simpson Iron Works in St. Louis were purchased at that time.

The Decatur and afterward the Mississippi companies had rapid and substantial growth, building up an organization which has become one of the leading structural steel fabricators of the Middle West. Land has been purchased in the Chicago district where the company expects to construct another fabricating plant which will add greatly to its position of prominence in the structural fields of the Middle West.

Mr. Wood, throughout his career, has advocated constructive methods for the development of the industry, and to this end has devoted considerable time and energy. He has been an untiring worker on behalf of the industry as he realizes that no individual can prosper at the expense of the industry as a whole. Mr. Wood is an active member of the Rotary club organization and is an automobile enthusiast. In the words of his associates, "he is a poor golfer but willing to learn." He is active in local civic affairs and a keen student of business. He is a man of high character, splendid reputation for honest dealings and widely recognized throughout the industry as a leader along safe, practical lines.

# Men of Industry

Personal News of a Business Character Pertaining to the Iron and Steel and Related Fields of Enterprise

SHIRLEY S. FRENCH, formerly vice president and general manager of the General Fireproofing Co., Youngstown, O., has been appointed president of the Berger Mfg. Co., Canton, O., structural fabricating division of the Central Alloy Steel Corp. Mr. French has been in the steel industry since leaving high school when he became a tally boy with a Youngstown steel company. In 1913 he was chief clerk of the Brier Hill Steel Co., later becoming general manager of William Tod Co., and in 1917 joining the General Fireproofing Co. as vice president and general manager.

* * *

W. H. Fitch, whose resignation from Fuller Lehigh Co., Fullerton, Pa., was announced several weeks ago, has joined the refractories division of the Carborundum Co. at Perth Amboy, N. J.

* * *

C. J. Dillon has been named head of the employment department of the Fort Wayne, Ind., plant of the international Harvester Co., succeeding M. J. Morgan, who resigned Sept. 30. Mr. Dillon had been traffic manager.

* * *

George Heffrin, formerly blast furnace superintendent at Bellaire, O., for the Carnegie Steel Co. has been appointed blast furnace superintendent at Corrigan, McKinney Steel Co., Cleveland. He succeeds W. R. Eberhardt who resigned about Oct. 1.

Mr. Heffrin had been associated with the old Corrigan, McKinney company 20 years ago at Charlotte, N. Y., before going with Carnegie.

* * *

Nathaniel K. B. Patch, recently named to serve as a director of the American Foundrymen's association for the three year term beginning in 1926, has been connected with the brass foundry industry since he was graduated from the Massachusetts Institute of Technology. His preparatory education was obtained at Buffalo. Mr. Patch joined the Lumen Bearing Co. at the time this organization was started and has remained with this company since. He spent four years as salesman, then in 1904 was made manager of the Canadian plant. Later he was made general superintendent of the Buffalo plant, until made works manager. In 1923 he retired as works manager because of impaired eyesight to assume the duties of secretary and advertising manager. Mr. Patch has been prominent in technical organizations con-

NATHANIEL K. B. PATCH

nected with brass founding industry, being an organizer of the American Brass Founders' association. He was elected one of the first directors and was president in 1911. Beside being actively associated with technical committees of the American Foundrymen's association he was chairman of the committee on nonferrous metals of the American Society for Testing Materials. He is a member of American Chemical society, American Electrochemical society, Institute of Metals, England, the institute of metals division of the American Institute of Mining and Metallurgical Engineers, the Buffalo Engineering society and the Buffalo chamber of commerce.

* * *

Harry R. Heneage has resigned as eastern manager of Joseph T. Ryerson & Son Inc., Chicago, to become supervisor of athletics for Dartmouth university, Hanover, N. H., his alma mater. Mr. Heneage had long been known to be intensely interested in athletics. In his college days at Dartmouth he was a star football player and since his graduation in 1907 has devoted as much attention to collegiate athletics as his time would allow. He has been in constant demand to officiate at leading football games. In view of his long association with the steel industry and the important position he held, his action came as a surprise to even many of his closest friends.

Mr. Heneage had been affiliated with the industry for 19 years, or since has was graduated from Dartmouth. He first obtained employment in the open-hearth department of the Lackawanna Steel Co., Buffalo, and after that with the Bethlehem Steel Co. Later he joined the Ryerson organization and in 1915, when that company opened its new warehouse in Jersey City, N. J., he was sent to New York as city sales manager. A year or so later he was appointed district manager, the position from which he recently resigned. In this capacity he was in charge of the company's foreign, as well as domestic activities in that district. In his new position, he will be in charge of Dartmouth's athletic plant and equipment, intercollegiate and intramural sports and will have faculty rank and representation.

* * *

E. W. Kempton, educational director of the American Steel & Wire Co., Cleveland, has been made a member of the board of the Y. M. C. A. school of technology in that city.

* * *

Ernest Smith has been made sales engineer in the office of Allis-Chalmers Mfg. Co., Milwaukee, recently established at Oruro, Bolivia. This is a suboffice of the district headquarters at Santiago, Chile.

* * *

R. M. Bayle, will be service manager in charge of the new Fairmont service station of the Westinghouse Electric & Mfg. Co., with headquarters at Fairmont, W. Va. Mr. Bayle was graduated from Ohio Northern university, Ada, O., as a bachelor of science in electrical engineering. He came with the Westinghouse company in 1918, and has had a varied experi-

(*Concluded on Page* 1208)

# Disagree Over Bounty Report

## Treasury Department Repudiates Conclusions Drawn by Mixed Commission in Berlin—Claims Right To Decide Issue on the Evidence—Findings in Favor of Germans Are Not Final

WASHINGTON, Nov. 2.—Considerable disagreement among government officials has developed over parts of the report of the German-American mixed commission which met in Berlin to obtain facts as to payment of bounties in Gemany on iron and steel products exported to the United States.

A summary of the commission's report as prepared by that body was made public by the treasury department, with a statement by the department repudiating the commission's findings that "no bounty is paid in Germany on exports of pig iron. Rolling mill products, when exported direct, also receive no bounty."

Statements of this kind are understood to have been resented by customs officials who contend it is their province to say whether a bounty has been paid.

The treasury department says:

"The attached press notice has been prepared and issued by the German-American mixed commission appointed to investigate bounties on German rolling mill products and manufactures thereof. Neither the statement that a certain transaction referred to therein appears to be a bonus but when analyzed amounts to a price concession made by the steel-producing to the steel-consuming industry on material which has been turned into finished wares and exported, nor any other statement made in the notice should be construed as a decision or expression of opinion by the treasury department as to whether or not a bounty within the meaning of Section 303 of the tariff act of 1922 is bestowed on finished wares manufactured from German rolling mill products.

"As soon as the treasury department has had an opportunity to analyze the report of the commission and reach a conclusion in the matter its decision will be published for the information of all concerned."

The commission's statement is:

"No bounty is paid in Germany on exports of pig iron. Rolling mill products, when exported direct, also receive no bounties. With regard to the exports of finished wares manufactured from rolling mill products, these fall into two classifications:

"1. Large orders for export are placed direct with steel producers, by the consumers at world market prices, as agreed upon between the plants and not higher than the prices fixed by the export committee representing the producers and consumers of iron under the agreement between the Raw Steel syndicate of Dusseldorf and the Association of Iron Consuming Industries within the Association of Industries of the German Reich in Charlottenburg.

"2. The second case concerns smaller contracts or purchases from dealers' stocks. These are purchased at domestic prices and when afterwards manufactured and exported, are entitled to a rebate amounting to the difference between the domestic price and the world market price.

"The above mentioned agreement between the German steel producers and consumers provides in the second case for a control by a system of certificates whereby the certificate showing the actual amount of material exported may be given in part payment to the German steelworks for new purchases of a similar amount of material. This transaction according to the commission's report appears to be a bonus but when analyzed it amounts to a price concession made by the steel producing to the steel consuming industry on material which has been turned into finished wares and exported."

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## Make Wide Flange Beams

(*Concluded from Page* 1165)

in the trade as Bethlehem sections, in recognition of the fact that they were developed and have been supplied solely by Bethlehem Steel Corp.

"These Bethlehem sections are widely used in the construction of bridges, subways and buildings. They are more economical than the so-called standard sections because they afford the required strength with less weight and also because they require less fabrication. For this reason in recent years their use has been rapidly growing, which has necessitated substantial increases in mill capacity from time to time. Bethlehem will make such further increases in its capacity as are required to supply the growing demand."

The foregoing are the only formal statements which have been made by the Steel corporation or the Bethlehem corporation. Following the quarterly meeting of Bethlehem, Oct. 28, reporters asked Mr. Grace as to the patents on the Grey sections. He replied that it would be difficult to discuss the subject because so many patents are involved. He said that when Bethlehem first took over the rights to the Grey sections their manufacture required much development and that Bethlehem has taken out many patents since in connection with the Grey beams. Many of these, he said, have a long time to run. In some cases patents have expired and have been renewed.

The impression prevails that Bethlehem Steel Corp will fight any attempt to infringe on its patents, but it has made no claims that the Steel corporation plans to do any infringing. On the other hand, it is believed to be the Steel corporation's policy not to infringe on any patent. It is because of this situation that the trade is interested in what may happen after the Steel corporation starts to market wide flange beams.

The success of the Grey sections in this country is a matter of history. The results of tests of the beams were the feature of the 1909 meeting of the American Society for Testing Materials, as set forth in IRON TRADE REVIEW of July 8, 1909. It was not long before architects and building engineers throughout the country became familiar with their merits and their use has grown tremendously.

To the Bethlehem Steel Corp. the exclusive right to manufacture and sell under the Grey patents has meant much more than the benefits derived from selling Grey sections alone. The possession of the Grey right has made the Bethlehem the only company in the United States able to supply every structural steel requirement. Bethlehem not only has the Grey sections, but also a full line of standard sections, plates, bars, and the like. Many consumers have been relying upon Bethlehem for their entire structural tonnage. As a result, Bethlehem has built up a huge structural business in the East. In various public hearings in recent years this dominance in the structural market has been the subject of testimony.

The introduction of competition in the manufacture and sale of wide flange shapes might have an important bearing from a market standpoint. Bethlehem sections, for instance, generally command an extra $2 a ton over the standard shape price. There are possibilities that present buying customs may be modified. Eastern plate mills, for instance, feel that there might be greater opportunity for them in selling plates for structural purposes. The situation is one that is pregnant with possibilities and it is being observed closely by producers and consumers.

## Men of Industry

(*Concluded from Page* 1206)

ence. He is a member of the American Institute of Electrical Engineers, and is a Registered Professional Engineer in Pennsylvania.

* * *

John P. McHale, for many years representative in Michigan for the Galion Iron Works & Mfg. Co., Galion, O., has resigned.

* * *

E. A. MacDonald has resigned as secretary and treasurer of the Standard Tank Car Co., Standard Transit Co. and Standard Home Co., Sharon, Pa., to become treasurer of Savage Arms Corp., Utica, N. Y.

* * *

Thomas T. Harrow has resigned as assistant to the vice president of the Bethlehem Steel Export Co., 25 Broadway, New York, to join the White Motors Co., Cleveland. Mr. Harrow will represent the latter company in Europe.

* * *

George B. Durell recently elected president of the American Fork & Hoe Co., Cleveland, formerly was vice president and general manager. He succeeds W. H. Cowdery advanced to the chairmanship. Mr. Durell continues his duties as general manager also.

* * *

J. A. McNulty has been appointed eastern manager of Joseph T. Ryerson & Son Inc., Chicago, to succeed Harry R. Heneage, who has resigned to become supervisor of athletics at Dartmouth university. Mr. McNulty has been associated with the Ryerson company for 15 years, the entire period with the New York organization. Prior to that he was in the traffic department, first of the Lake Shore & Michigan Central and then of the Delaware, Lackawanna & Westtern. Mr. McNulty's appointment is effective Jan. 1. In recent years, he has been assistant Eastern manager under Mr. Heneage.

* * *

D. M. Weir, vice president of the Weirton Steel Co., Weirton, W. Va., was re-elected executive head of the West Virginia Manufacturers' association recently at the annual meeting of the board of directors at Wheeling. W. Va.

I. M. Scott, president of the Wheeling Steel Corp. is a member of the board of the West Virginia Manufacturers' association.

# Obituaries

GEORGE A. DRYSDALE, former metallurgical editor of *The Foundry*, a Penton Publication, and recently metallurgical engineer for the Columbia Chemical division of the Pittsburgh Plate Glass Co. at Barberton, O., died in Cleveland, Nov. 1, at the age of 52 years. Mr. Drysdale had been identified with the foundry industry since 1898 serving as chemist, research director and metallurgist for various companies. He was graduated from McGill university, Montreal, Que. He was with the Midwest Engine Corp., Indianapolis, and its associated interest the Hill Pump Works, Anderson, Ind., from 1913 until Feb. 1, 1924, when he joined *The Foundry*. He left *The Foundry*, June 1, 1925, to join the Metal Improvement Co., Cleveland, and later the Pittsburgh Plate Glass Co.

* * *

Edward Leitelt, member of Leitelt Bros., Chicago, brass and aluminum founders, died Oct. 16. He was born July 4, 1874 at Grand Rapids, Mich. and with his brother organized the company bearing his name.

* * *

Elwood J. Junkin, president and secretary of the Advance Aircraft Co., Troy, O., died there Nov. 1 at the age of 69 years. He came to Troy from Cleveland about four years ago to organize his company which built commercial planes. Mr. Junkin was well known as an aviator and designer of planes.

* * *

Henry J. Gosling, inventor of some of the first file-cutting machinery in the United States and for more than 45 years connected with the Black Diamond File works, died recently at his home in Philadelphia, aged 78 years. He was born in England and came to this country at the age of 18.

* * *

Charles A. Ackerson, formerly of the Rochester Car Wheel works, Rochester, N. Y., died in Denver, Oct. 12. After leaving the Rochester works he established the Syracuse Aluminum & Bronze Co. at Syracuse, which later was merged with the American Aluminum & Bronze Corp. at Detroit, Mr. Ackerson becoming treasurer of the latter organization.

* * *

Charles Elliott, general superintendent of the Mt. Vernon Car Mfg. Co., died at his home in Mt. Vernon, Ill., Oct. 26. He was born in Scotland 58 years ago. He had experience in the shipyards in Scotland and came to this country when about 20 years old. He was in the employ of steel mills in the Pittsburgh district and about 20 years ago entered the car building business. He came to Mt. Vernon in April, 1916 as general superintendent of the Mt.Vernon Car Mfg. Co.

* * *

James D. Robertson, aged 56, president of the Warren Tool & Forge Co., Warren, O., for the past four years, died Oct. 28 in the Pittsburgh & Lake Erie railroad station at Pittsburgh a short time after he had suffered a stroke of apoplexy. Prior to being elected president of the Warren company, Mr. Robertson was vice president and sales manager of the Pittsburgh Valve Foundry & Construction Co., Pittsburgh, having been affiliated with that interest about 35 years. He was a member of the Rotary club, Warren, O., and the Pittsburgh Athletic association, Pittsburgh.

* * *

Myron I. Arms, one of the founders of the sheet steel and black plate industry in the Niles, O., district, died Oct. 28 at his home in Youngstown, O., of heart failure at the age of 72. Mr. Arms was born at Youngtown, Jan. 20, 1854, and was educated at the Rayen high school and Cornell university. He entered a Youngstown bank where he received thorough business training. In the early eighties, he and his brother, Warner Arms, bought a controlling interest in the Falcon Iron & Nail Co., Niles, then producing puddled iron sheets and wrought nails. For years he occupied the office of treasurer. Fine Russia iron sheets were manufactured for years, laying the foundation for Niles' later prominence in the American sheet trade. His company was one of the first in the valley to begin the manufacture of tin mill black and tin plate in a new mill built in 1893 after the McKinley bill became a law. Both these plants later were sold and became part of the American Sheet & Tin Plate Co. He then organized the General Fireproofing Co. at Youngstown, being chairman of the board; and also the chairman of the Ohio Leather Co. He was a director of local banks and charitable institutions

# Machinery

## October Equipment Sales Somewhat Better Than in Preceding Month—Few Large Inquiries Out—Crane Purchases Drop

OCTOBER sales of machine tools and equipment were only fair, but in most cases exceeded the record for September and were at about the same level as for October one year ago. Small orders constitute the business being placed, but this condition is extremely healthful. Railroad and automotive buying is cutting little figure, the latter industry decreasing operations and proceeding with caution. Railroads take a tool or two as demand necessitates. The largest inquiry of any size before the trade is that of the Norfolk & Western railroad, which as announced previously is asking for about 140 tools. Westinghouse Electric & Mfg. Co. has made a few purchases against its recent list. Crane buying has slackened off with inquiry light.

**New York, Nov. 2.**—Featuring the eastern machine tool market is a large list of 1927 requirements for Norfolk & Western railroad. Fully 140 machine tools are said to be specified. Railroad activity, otherwise, is rather slack, with the New York Central adding an occasional tool to its now substantial list of recent purchases. Included in recent orders by this railroad are two 27-inch x 16-foot engine lathes, placed with Niles-Bement-Pond Corp. A leading industrial buyer is Singer Sewing Machine Co., Elizabethport, N. J., which has closed on 15 automatic milling machines, to the Pratt & Whitney Co. Other buyers are the Warner & Swasey Co., Cleveland, and American Tool Works, Cincinnati, both of whom have placed orders for vertical surface grinder with Pratt & Whitney Co. General Electric Co., Schenectady, N. Y., has issued inquiries for a half dozen tools or so for its various plants. The equipment includes an engine lathe, a milling machine, a shaper and a grinder. Trading during the month just closed was, according to most sellers, about on a parity with September, which was only fairly active. Most sellers express disappointment in the situation thus far this fall. However, in view of the brisk business in the first eight months, the first half particular, there is little question but what the current year will be the best since 1923.

**Chicago, Nov. 2.**—Continued sales resistance marks the machine tool market in this territory. Sales for the most part dispose of one or two tools at a time October generally is better than the same period last year, but probably will not prove any better than September, which generally was considered rather slow. Inquiries are in fair volume, including the two large lists of Pullman Car & Mfg. Co. and Illinois Steel Co., but buyers do not seem anxious to close rapidly. Chicago, Milwaukee & St. Paul is inquiring for two motor-driven, double-end emery grinders capable of a 12-inch wheel. One or two automotive interests are showing normal interest in the market, as are agricultural implement makers. Chicago board of education this week took bids for a motor-driven speed lathe for the Harper junior high school. Despite the sluggishness, rumors of price advances in the near future persist, one concern already having increased quotations on drill presses slightly. The crane market is dull, for both overhead and locomotive types.

**Boston, Nov. 2.**—October sales of machine tools in New England held about level with the September total. Inquiry at present is only fair, but manufacturers are operating close to 70 per cent of capacity, and most of them have 60 days' work in sight. Presses and sheet fabricating tools have been prominent in the sales of the week. A Worcester, Mass., sheet metal worker took two large presses and other presses were placed at Springfield, Mass., and New Haven, Conn. Sullivan Machinery Co., Claremont, N. H., has closed on a list of four or five tools including a large boring mill and is tentatively in the market for other equipment. General Electric Co. is in the market for a shaper and other tools for its Pittsfield, Mass., plant. Several Connecticut manufacturers soon will be in the market for tools for plant extensions now under construction.

**Pittsburgh, Nov. 2.**—The equipment market has been exceedingly quiet this past week both as to crane and machine tool orders. Westinghouse Electric & Mfg. Co. made a few additional purchases against its list, taking a special bending machine, a production drill, and one or two other items. Chicago Pneumatic Tool Co., Franklin, Pa., made partial purchases against its requirments for expansion there. Purchases by the board of education now are practically concluded for two trade schools, order distributions having been made among several sellers. Other spasmodic sales of one or two items at a time are noted, including a hammer and beam shear, a few lathes, as well as other standard tools. Carnegie Steel Co.'s purchases for Clairton may not be made until after the first of the year, but recommendations now are in on several items for Duquesne, Pa. One representative crane builder reports that its fiscal year just ended is the best so far as the Pittsburgh district is concerned since 1920. Crane orders this past week have been nil and only one or two new crane inquiries are out.

**Cleveland, Nov. 2.**—Both manufacturers and dealers of machine tools in this district closed October with more business on their order books than in September by as much as 25 per cent in some cases. Few large purchases were made, the bulk of sales being for one or two units at a time. The automotive interests in Detroit are extremely inactive and gradually decreasing operations as demand for cars falls off. Introduction of new models around the first of the year, however, are expected to stimulate the demand for manufacturing equipment. Used equipment continues in good demand.

### CRANE ORDERS PLACED

Four 25-ton locomotive cranes and one ditcher for New York Central railroad awarded as follows: One for Cleveland to Brown Hoisting Machinery Co.; one for Bucyrus, O., to Ohio Locomotive Crane Co.; one for Buffalo and another for New York, both going to Industrial Works; the ditcher to American Hoist & Derrick Co. Another crane for Cleveland and still another for New York, it is understood, will be purchased later

Two 3-ton handpower cranes for Metal & Thermit Corp., Chrome, N. J., to Chisholm-Moore Mfg. Co.

Among single orders were: 50-ton electric crane for National Supply Co., Toledo, O., to Shaw Crane Works; 20-ton trolley for B. A. & G. M. Williams, New York, to Shaw Crane Works; 15-ton electric crane for J. H. Horner & Co., Newark, N. J., to Shaw Crane Works; 10-ton electric crane for National Tube Co., McKeesport, Pa., to Shaw Crane Works; 100-ton electric overhead crane for Virginia Light & Power Co., Norfolk, Va., to Cleveland Crane & Engineering Co., through Stone & Webster; 5-ton handpower crane for stoneyard in Brooklyn to New Jersey Foundry & Machine Co.; 3-ton handpower crane for Ideal Marble Co., Union City, N. J., to Alfred Box & Co.; 5-ton crane for Gulf Refining Co., New York, to Alfred Box & Co.; 25-ton locomotive crane for Missouri Pacific to American Hoist & Derrick Co.; 15-ton locomotive crane for Taylor Colquist Co., Spartansburg, S. C., both contracts going to American Hoist & Derrick Co.; 10-ton crane for Weirton Steel Co., Weirton, W. Va., to Shaw Crane Works.

### CRANE ORDERS PENDING

10-ton handpower crane for Tidewater Oil Co., New York; bids in.

## Screw Machine Products Industry Improves

Washington, Nov. 2.—Screw machine products produced in 1925 were valued at $42,998,291 compared with $39,238,582, a gain of 9.6 per cent, according to the biennial census of manufactures just completed by the department of commerce. In 1923, 180 establishments were engaged in this manufacture while in 1925, 185 were in the field. The average number of wage earners dropped 3.3 per cent from 9126 to 8825 but wages increased 4.2 per cent. The cost of materials increased 17.1 per cent and the value added by manufacture 3.7 per cent.

# Industrial Business Changes

PNEULEC MACHINE CO. Ltd., Smethwick, Birmingham, Eng., manufacturer of foundry equipment has changed its name to Pneulec Ltd. There has been no alteration in the personnel of the company or in its policies or operation. This company manufactures molding machines, core machines, core oils, cupolas, melting room appliances, and miscellaneous foundry supplies and equipment.

* * *

C. C. Truax, financial counsellor, has moved its offices to the Home Bank building Toledo, O.

* * *

S. J. Stern Co. Inc. announces its removal from 8 West Fortieth street to 42 Broadway, New York.

* * *

Equitable Equipment Co., New Orleans, La., has moved its offices from the Whitney Central building to 410 Camp street.

* * *

M. W. Chipman Machine Co., 216 Market street, Lynn, Mass., has been reorganized with Mrs. Olive A. Chipman president, William N. Varney manager and Mary C. Burke secretary.

* * *

Cleveland Scrap Metal Corp., Cleveland, has moved from 1714 Columbus road to 7610 Woodland avenue.

* * *

Sta-Warm Electric Heater Corp. has moved its plant and offices from Minneapolis, Minn., to 553 North Chestnut street, Ravenna, O.

* * *

Detroit Steel Corp. has moved its offices from 11801 Oakwood boulevard to 917 South Oakwood avenue.

* * *

American Machinery & Equipment Co., Detroit, has moved its offices to 2532 Twenty-fourth street.

* * *

Burdel Engineering Co., Dayton, O., manufacturer of tools, dies and special machinery, has moved to its new plant at 138 North Madison street.

* * *

Luria Bros., iron and steel scrap, have moved their Boston office, M. B. Kafker manager, from the Board of Trade building to the Statler building.

* * *

Lincoln Steel Co. has moved its general offices in Chicago from 2320 West Fifty-eighth street to 229 West Illinois street, where larger quarters have been obtained.

* * *

Gokeler & Stanton, 220 West Forty-second street, New York, manufacturer of machinery, has been succeeded by Gokeler & Co., with A. L. Gokeler as president.

* * *

Colossus Co. Shreveport, La., manufacturer of metallic piston packing and power specialties, has established a branch plant at Portland, Oreg., 100 x 200 feet. J. R. Russell is president.

* * *

Allis-Chalmers Mfg. Co., West Allis, Wis., is opening an office at Jackson, Mich., 512 Reynolds building, in charge of L. F. Berry. It is a branch of the company's office at Detroit, of which F. S. Schuyler is district manager.

## Melt of Ohio Foundries Declines Slightly

Operations of Ohio foundries in September showed a slight decline from those of August, according to statistics compiled by the Ohio State Foundrymen's association. The September rate was 85.8 per cent of normal against 87.6 per cent in August and 84.3 per cent in September one year ago. The melt during the month amounted to 15,427 tons while the normal melt is regarded as 17,969 tons. Stocks received, including all grades of pig iron and scrap, both ferrous and nonferrous, increased from 71 per cent in August to 85 per cent in September. One year ago the figure was 78 per cent. September stocks received, were equal to 15,445 tons. Stocks on hand also increased, raising the August figure of 84 per cent to 101 per cent. In September, 1925, stocks were 88 per cent of the normal melt. At the close of the month 18,213 tons of stocks were on hand. Nonferrous operations declined only 1 per cent, September indicating 78 per cent and August 79 per cent. One year ago, operations were on the basis of 58 per cent.

# Iron and Manganese Ores and Minerals

## Iron Ore

### LAKE SUPERIOR ORES

Per Gross Ton Lower Lake Ports

| | |
|---|---|
| Old range bessemer, 51½ per cent iron | $4.55 |
| Mesabi bessemer, 51½ per cent iron | 4.40 |
| Old range nonbessemer, 51½ per cent iron | 4.40 |
| Mesabi nonbessemer, 51½ per cent iron | 4.25 |

### EASTERN LOCAL ORES

Cents per unit delivered at Eastern Pennsylvania and New Jersey furnaces

| | |
|---|---|
| Foundry and basic 53 to 63 per cent | 9.00 to 10.50 |
| Copper free low phosphorus 53 to 65 per cent | nominal |

### FOREIGN IRON ORE

Cents per unit, f.o.b. cars Atlantic ports

| | |
|---|---|
| Spanish low phosphorus, 52 to 54 per cent | 10.00 to 11.00 |
| North African low phosphorus | 9.25 to 9.75 |
| Swedish and Norwegian low phosphorus, 68 per cent | 10.25 to 10.75 |
| Swedish foundry or basic, 66 to 68 per cent | 9.00 to 9.50 |
| Spanish foundry or basic, 50 to 54 per cent | 8.75 to 9.25 |
| North African foundry and basic 50 to 54 per cent | 8.50 to 9.50 |

(All foreign ore prices now nominal)

## Manganese Ore

Prices do not include duty at rate of 1 cent per pound of metallic manganese contained.

| | |
|---|---|
| Brazilian, minimum, 47 per cent, 34 to 36 cents | |
| Indian, minimum 47 per cent | 34 to 36 cents |
| Caucasian, 53 to 55 per cent Washed | nominal |

## Fluor Spar

85 and 5 per cent grade

| | |
|---|---|
| Washed gravel, Kentucky and Illinois mines, per net ton | $18.00 |
| Washed gravel, imported duty paid eastern tidewater, per ton | 16.75 to 17.50 |

## Buying Hand-to-Mouth

(*Concluded from Page* 1172)

manufactured by the Machinery Co. of America is described in No. 180. This machine was built for the Simonds Saw & Steel Co., Fitchburg, Mass., and is equipped with a 220-inch magnetic chuck made by the O. S. Walker Co. It is designed for grinding locomotive guide bars, shear blades, general surfacing, face or edge grinding, or any similar work where the grinding of flat surfaces is required. It is listed in sizes from 84 to 192 inches and is adapted for a width of grind up to about 12 inches. A feature of the machine is that the work is held stationary and the grinding wheel travels. The grinding wheels are either 24 or 30 inches in diameter made up of abrasive segments.

Brown & Sharpe Mfg. Co. has placed on the market the motor-in-the-base type of surface grinding machine shown in No. 179. The motor is completely protected from oil, water, dust, dirt and other sources of trouble. Power to the wheel is supplied by a belt. Longitudinal table travel and transverse movements are automatic. The machine accommodates work up to 18 inches long, 6 inches wide and 9½ inches high when a 7-inch wheel is used.

In No. 184 is described a circular relief grinder marketed by the Cleveland Tool Engineering Co. It is designed to provide relief on reamers, taps and milling cutters. The outside face of the wheel is dressed concavely to exactly the same curve as the tool to be ground. The tool then is offset from the center of the curve of the wheel to give the desired clearance, then is ground clear to the cutting edge in one operation.

## Grinder Permits Side Clearances

No. 184

Cleveland Tool Engineering Co., Cleveland, recently has placed on the market a new motor-driven circular relief grinder particularly adapted for grinding all tools requiring side clearances. The chief advantage claimed for this machine is that it grinds the entire relief in one operation. Floor space required measures 32x36 inches; swing is 5 inches with a distance between centers of 15 inches.

## Riveter Assembles Chassis Frames

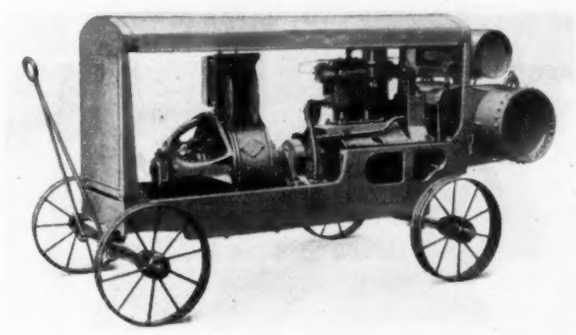
No. 186

Hanna Engineering Works, Chicago, has developed a new type of pneumatic riveter designed especially for assembling automobile chassis frames. The riveter is made in 10, 15 and 20-ton capacities for cold-riveting ¼, ⅞ and ⅝-inch rivets respectively. Jaws swing outward for inserting and removing work and are operated pneumatically.

## Air Compressor Is Portable Type

No. 185

Sullivan Machinery Co., Chicago, has brought out a new portable motor-driven air compressor with a capacity of 103 cubic feet per minute. Compressor is of the 2-cylinder vertical type and is mounted with the motor, on a cast steel truck frame. Air receiver is suspended outside the canopy top at the compressor end and a tank for circulating water is mounted above it. Water is circulated through the compressor jacket by a small centrifugal pump driven by a pulley on the main driveshaft. Motor is of standard make, 20 horsepower, and can be furnished for either direct or alternating current. Rheostat and starting equipment are mounted on top of the motor housing. Truck frame is a heavy one-piece steel casting affording a solid bedplate for the entire rig and thus reducing vibration to a minimum. The trailer mounting comprises special axles and rubber-tired steel wheels.

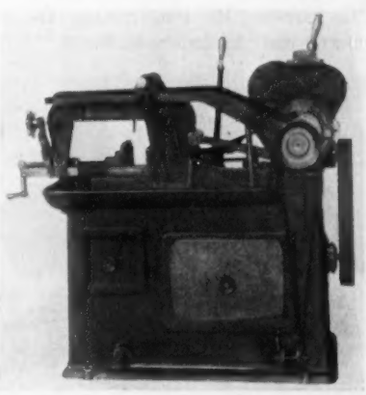


## New Saw Does Production Cutting

No. 187

Racine Tool & Machine Co., Racine, Wis., has placed on the market a new shear-cut production saw for high-speed metal cutting. Specially featured is an automatic screw feed mechanism which, it is claimed, reduces the cutting time considerably and greatly lengthens the life of the saw blade. Feed is determined by the size of stock to be cut and the feed lever is set by hand. A convenient plate on the machine indicates proper speeds and feeds. By means of an automatic device, the clutch is thrown out and the feed mechanism released after the cut is finished. Machine is furnished with either belt or motor drive and both types can be supplied with single or 3-speed transmission. The latter provides speeds of 60, 90 and 130 strokes per minute and is mounted directly on the main shaft.

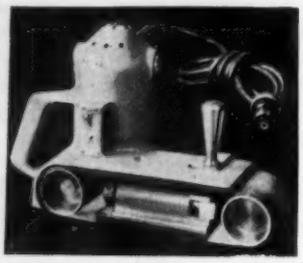
Saw accommodates work up to 6⅝ x 6⅝ inches; stroke is 6 inches. Floor space required measures 30 x 50 inches, height over all is 44½ inches and weight varies from 700 to 900 pounds. Six-inch shafting is cut in 26 minutes.



## Portable Sander Has Several Uses

No. 188

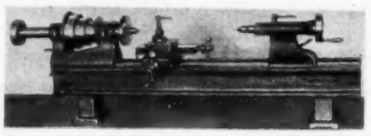
Porter-Cable Machine Co., Syracuse, N. Y., has developed a new type of portable sanding machine, adaptable for finishing both wood and metal surfaces. By using blocks of the proper shape, the sander can be operated on various convex and concave surfaces. Frame is of one-piece cast aluminum; motor is universal type of 1/3 horsepower. Belts can be changed instantly.



## Bench Lathe Has Many Attachments

No. 191

Rivett Lathe & Grinder Corp., Boston, has placed on the market a new bench lathe, the small size and general adaptability of which particularly fit it for toolroom service. The machine can be equipped with numerous attachments for turning, drilling, boring, milling and grinding. Bed is 38 inches long with a maximum of 20 inches between centers. Top slide has 5 inches travel and cross slide, 4⅜ inches. Spindle speeds range from 216 to 1100 revolutions per minute. Weight is 200 pounds.



## New Tapping Chuck Is Adjustable

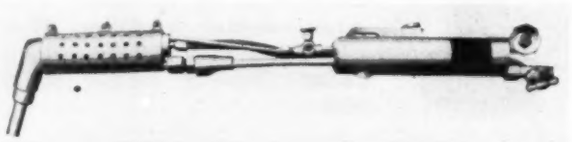
No. 189

Apex Machine Co., Dayton, O., has brought out a new vertical float tapping chuck to be used on multiple spindle tapping machines. The tool is designed to compensate for uneven starting of taps and for the various leads of different sizes of taps, thus tending to eliminate breakage. The free floating collets are of standard type. Chuck is made in two sizes, ⅝ and ¾-inch tap capacity and can be furnished with friction drive for bottom hole tapping.

## Cutting Torch Uses Heated Oxygen

No. 192

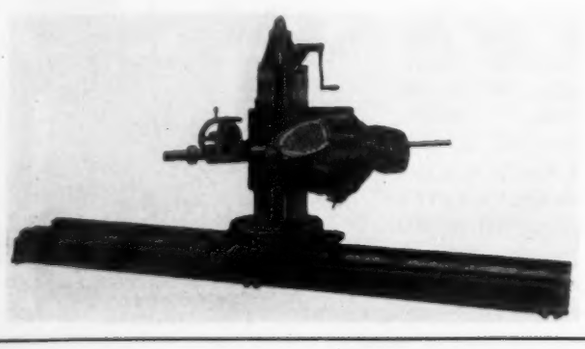
Alexander Milburn Co., Baltimore, has developed a gas cutting torch for use with illuminating and by-product gases. A feature of the design is a superheating device for heating and expanding the cutting oxygen. The torch is 21 inches long and is ruggedly constructed of bronze forgings and specially drawn tubing. Oxygen supply is controlled by a thumb valve.



## Designs Special Horizontal Drill

No. 190

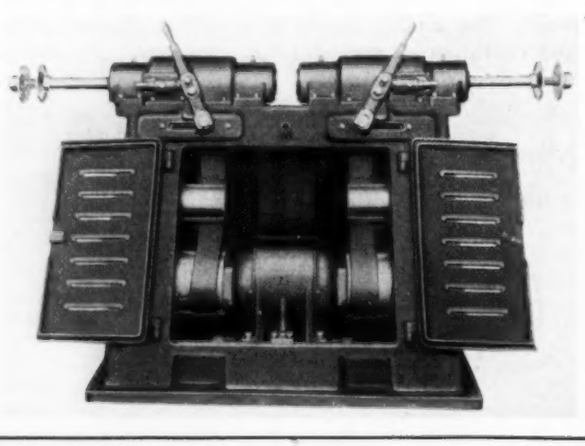
Hoefer Mfg. Co., Freeport, Ill., has developed a new horizontal drilling machine, intended for drilling oil holes in the crankshaft throws of large diesel engines. On the base, which is bolted to the floor plate by three ears, is mounted a cut steel rack the full length of the bed. By means of the handwheel the column can be moved to any position desired. Saddle is scraped to the scraped ways on the bed and can be locked in position instantly. Column is fastened to the saddle by a swivel bearing so that holes can be drilled at any angle. The self-contained head is counterbalanced and carries the motor; pick-off gears give ample range of speeds. Spindle and spindle quill are of special length, giving a maximum feed of 20 inches. A crank on the column affords the head and up-and-down adjustment of 12 inches. By lengthening the table, any length of shaft can be accommodated.



## Buffer Has Independent Spindles

No. 193

Hisey-Wolf Machine Co., Cincinnati, has brought out a new selective-speed buffer, motor-driven, with two independent spindles. By means of belt shifters either spindle may be operated independently and an adjustable brake engages automatically when the belt is shifted. Belt tension is regulated by levers on each end of the machine. Two doors on the rear side of the base give access to the motor and drive belts. Oversize ball bearings are used throughout and are provided with liberal means of lubrication. Spindle speeds can be furnished up to 3000 revolutions per minute; if desired, machine can be supplied with a different speed for each spindle. Buffer is made in three sizes with 7½, 10 and 15-horsepower motors.



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# Another 600-Foot Lake Steamer Launched

The Great Lakes freighter named ROBERT HOBSON, named in honor of the president of the Steel Co. of Canada, who died last February, was launched at the Lorain, O., yards of the American Shipbuilding Co., Saturday, Oct. 30. The HOBSON is a duplicate of the steamer WILLIAM MCLAUCHLAN, launched at the Lorain yards Oct. 7. It is the second of three vessels, all of the 600-foot class, being built for the Interlake Steamship Co., subsidiary of Pickands, Mather & Co., Cleveland. The third still is to be launched. All three will be ready for the iron ore and coal trade in 1927.

# Drawback Is Continued

Washington, Nov. 2.—A treasury decision issued some time ago providing for payment of drawback on tool steel manufactured by Atlas Steel Corp., Dunkirk, N. Y., with the use of imported ferrotungsten or tungsten powder, later amended in favor of the Atlas Alloy Steel Corp., successor to the Atlas Steel Corp. has been further amended to cover the manufacture of these products by the Atlas Steel Corp. which has succeeded the Atlas Alloy Steel Corp. The decision has been extended to provide for the allowance of drawback on tool steel made from imported high speed scrap.

# Discuss Safety in Steel Plants

## Company Representatives Take Prominent Part in National Convention in Detroit—Practical Information Developed—Contests Advocated To Maintain Interest in Movement

REPRESENTATIVES of iron and steel companies as usual took a leading part in the discussions incident to the fifteenth annual safety congress in Detroit last week. Their activities were centered in the meetings of the metals section. Clarence H. Howard, president, Commonwealth Steel Co., Granite City, Ill. was one of the principal speakers at the session devoted to industrial safety. He said that only about 30 per cent of accidents can be prevented by mechanical safeguards, emphasizing the importance of training individuals to work safely.

T. H. McKenney, Illinois Steel Co., South Chicago, and John A. Oartel, Carnegie Steel Co., Pittsburgh, who have played prominent roles in the safety conventions many years, summarized some of their recent experiences. The subject of their remarks was "Just a Word from Tom and John."

H. A. Schultz, assistant manager, bureau of safety, sanitation and welfare, United States Steel Corp. advocated making every department head a safety director.

The session Wednesday morning devoted to "Tips Direct from the Shop" was featured by an address on averting foundry hazards, by W. C. Wright, National Founders' association, Chicago. Discussion was led by F. G. Bennett, Buckeye Steel Castings Co., Columbus, O. Frank W. Cramer, electrical engineer, Cambria plant, Bethlehem Steel Co., discussed some of the electrical hazards in the steel industry.

The round table discussion Thursday took the form of an educational forum on the merits of contests, posters, rule books, letters to foremen and use of lantern slides.

"Contests have been a great help in minimizing accidents at our plant," said J. A. Voss, safety director, Central Alloy Steel Corp., Massillon, O. "It is fundamentally right to apply the principle of co-operative effort to accident prevention, but the success depends on the ability to arouse and continue the superintendents, foremen and employes' interest in the work. No means offers itself to so promptly arouse this interest and continue it as does the placing of accident prevention on a competitive basis.

"Only those accidents which result in one full day or more lost time are counted for competitive rating purposes. All accidents are reported and studied to prevent a recurrence, but it was found necessary to base the rating only on those involving lost time, that there would be a standard for determining what constituted an accident for rating purposes. If minor accidents are included in a competitive rating plan, there is always a tendency to avoid reporting them and the fairness of the plan is jeopardized."

The Youngstown Sheet & Tube Co. has had a safety rule book for 16 years, revised as circumstances required, James M. Woltz, the company's safety director said. A copy of the book is given to each new employe, who signs a receipt, and thereafter he is held responsible for infraction of the rules. "Our executives are convinced of its utility," said Mr. Woltz. "Department heads make their own rules and say they want them. The foremen are not at all convinced it is a good thing, but employes generally have a wholesome respect for it."

E. G. Quesenel, safety engineer, Commonwealth Steel Co., analyzed the advantages of using good posters. Actual specimens of letters sent to foremen touching on the enforcement of safety rules were read by Frank H. Rowe, safety director, Wheeling Steel Corp., Portsmouth, O. He placed safety letters in four classifications, letters of praise, of criticism, of information, and of general interest. The safety director often can impress his message on foremen more expeditiously by writing a letter, than by interrupting him in the regular course of his shop duties to talk with him. Letters of general interest are devoted to keeping the foremen informed as to what other companies are accomplishing in reducing accidents.

Others who participated in general safety discussions were G. A. Kuechenmeister, Dominion Forge & Stamping Co., Walkerville, Ont.; H. G. Hensel, safety director, Youngstown Sheet & Tube Co., Chicago; C. B. Auel, Westinghouse Electric & Mfg. Co.; Arthur T. Morey, general manager, Commonwealth Steel Co.; Charles C. Sunderland, John A. Roeblings' Sons Co., Trenton, N. J., and H. W. Mowery, American Abrasive Metals Co., New York.

Walter G. King, New York, in charge of the safety activities of the American Optical Co., was elected president of the National Safety council, succeeding Charles B. Scott. Other officers elected are: W. F. Austin, Detroit, vice president for engineering; A. W. Whitney, New York, vice president for education; H. A. Reninger, Allentown, Pa., vice president for local councils; Charles E. Hill, New York, vice president for public safety; Dr. L. A. Shoudy, Bethlehem, Pa., vice president for health; C. E. Pettibone, Boston, vice president for industrial safety; H. E. Neisz, Chicago, vice president for public relations; H. M. Webber, Chicago, treasurer and vice president for finance; and W. H. Cameron, Chicago, managing director.

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## Canadian Iron and Steel Production Grows

Production of pig iron in Canada for September was 64,187 long tons, or 9 per cent over the 58,780 tons reported for August, while at the same time it was almost double the 34,609 tons made in September, 1925. For the nine months ending September the total was 561,063 long tons, compared with 372,960 tons for the corresponding nine months of 1925. Basic iron increased 32 per cent to 371,803 tons; foundry iron 129 per cent to 149,252 tons; and malleable 63 per cent to 40,008 tons.

While there was no change in the price of iron during September, an advance of 50 cents went into effect early in October. Current prices are as follows: No. 1 (2.25 to 2.75 silicon) $25.30; malleable, $25.30; No. 2, (1.75 to 2.25 silicon) $24.80, Toronto.

Production of steel ingots and castings during September at 58,837 long tons, marked an increase of 29 per cent over the 45,674 tons in August. While the production of direct steel castings fell off to 1673 tons in September from 2128 tons in August, the loss was more than offset by the output of steel ingots, which advanced from 43,546 tons in August, to 57,164 tons in September.

# Entente Prompting Other Pacts

## Recent Accord Among Steelmakers of France, Germany, Belgium and Luxemburg Promises to Broaden and Set Pace—Official Recognition to Come Through Commercial Treaties—Rail Allocations Are Adjusted

By Vincent Delport
*European Manager, Iron Trade Review*

LONDON, Oct. 28.—In confirmation of previous expectation the materialization of the continental steel entente is giving birth to other such organizations, grouping the interests of manufacturers of certain iron and steel products. Promoters of the steel ingot agreement themselves are anxious to see other countries join, and M. Mayrisch, president of the Arbed and of the continental steel combine, has sent an invitation to the Czecho-Slovakian and Polish steelworks and to the Resita iron and steel works in Rumania to send delegates to Luxemburg for negotiations relating to the adhesion of the steelworks of these countries to the entente. The delegates from Czecho-Slovakia are expected to go to Brussels toward the end of the month in order to discuss the question. In the meantime negotiations are being conducted concerning a partial agreement between the steelmakers of Czecho-Slovakia, Austria and Hungary. In Sweden the iron and steel works of Fagersta, Kloster, Horndal and Gimo-Osterby, which are controlled by the Handelsbank, are being merged. This has been rendered possible through the acquisition by the Svenska Handelsbank of the shares which the government was holding in certain of the works concerned. Amalgamations also are taking place in Poland.

### Sweden May Now Join

When these countries thus begin to group their works it may be said that the first step is being taken toward joining the continental entente, and according to latest reports Sweden is now desirous of doing so. Great Britain's position is somewhat different, as was shown in IRON TRADE REVIEW of Oct. 21. It is interesting to note that, apart from Germany, the participants of the present combination are very nearly exceeding their quotas; in fact, Luxemburg and Belgian steelworks are contemplating the necessity of reducing production in order to remain within bounds. However, it is to be noted that these circumstances will be taken into account when the basis of production is fixed for the second period of three months, providing the present rate of production is absorbed.

It appears from statements made by M. Mayrisch in Berlin recently that although the governments of the countries concerned in the steel entente favored the negotiations, active support will only be given as commercial treaties of wider scope come into effect. Private arrangements between Germany, Lorraine, Luxemburg and the Saar are also now becoming effective. With regard to France and Luxemburg, these countries will be able to export iron and steel to Germany to the extent of 3.75 per cent of the German consumption for France and 2.75 per cent of the German consumption for Luxemburg, at the German syndicate prices. If these quotas were not disposed of the German syndicates themselves would take over the balance. German buyers would undertake to pay half the duty on French and Luxemburg products, whereas Saar products would enter free.

### Agree on Many Products

The importance of the international cartel movement is emphasized by the fact that an agreement is already in existence between the tube manufacturers of France, Belgium, the Saar territory, Germany, Czecho-Slovakia, Poland and Hungary. Active negotiations are being carried on between the wire products manufacturers of Belgium, Germany, France and Holland. Then there also are private agreements between France, Belgium and Luxemburg for the fixing of pig iron prices, and between France and Germany for the control of pig iron imports between those two countries.

It will be recalled that this co-operative movement was started with the formation of the European Rail Manufacturers' association. As a matter of fact, although this association has been practically working since last March there were still a few differences between the participating countries on the subject of the allocation of orders. We understand that these difficulties have been overcome at a meeting which took place in London on Oct. 15 and association will soon enjoy an official existence.

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## Bilbao Iron Ore Industry in Depression

Washington, Nov. 2.—The iron mining industry centered about Bilbao, Spain, is suffering the greatest depression of its history, according to cabled advices from Commercial Attache C. H. Cunningham, Madrid, to the department of commerce. Exports of iron ore in August totaled 13,000 metric tons and those for September 36,000 tons a marked increase; but these shipments continue far below the 1925 figures, in September of which year 123,000 tons were sent abroad. The principal purchaser of the Spanish ore was the Netherlands. British purchases were practically nil. This acute situation is offset somewhat by the steady prosperity of the Spanish metallurgical plants which are operating full time.

There is marked competition between France and Germany for the Spanish markets for a number of commodities including steel products. British steel exports to Spain are virtually at a standstill.

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## Fewer Cars Need Repairs

Washington, Nov. 2.—Freight cars in need of repair Oct. 1 totaled 149,078 or 6.5 per cent of the number on line, according to the American Railway association. This was a decrease of 11,419 from Sept. 15 at which time there were 160,497 or 7 per cent. Freight cars in need of heavy repair Oct. 1 totaled 114,167 or 5 per cent, a decrease of 6893 cars from Sept. 15, while freight cars in need of light repair total 34,911 or 1.5 per cent, a decrease of 4526 cars.

Locomotives in need of repair on Oct. 1 totaled 8889 or 14.2 per cent of the number on line. This was a decrease of 497 from Sept. 15, where there were 9386 or 15 per cent. Serviceable locomotives in storage Oct. 1 totaled 4680 compared with 5086 Sept. 15.

# News of Societies

MEMBERS of the American Society of Mechanical Engineers will conduct their annual meeting at the Engineering Societies building, New York, Dec. 6-9. As has been the custom for several years past, the National Exposition of Power and Mechanical Engineering will be held at the Grand Central Palace in New York during the same week and will prove an added attraction to the mechanical engineers. Some 500 exhibitors will occupy the four floors of the palace and will display all types of mechanical equipment.

Sessions of the mechanical engineers convention will begin on Tuesday morning, Dec. 7, and will continue through Thursday, Dec. 9. Monday, Dec. 6, has been set aside for meetings of the council and conferences of local sections delegates. An open house will be held on Monday evening and the presidential address and reception on Tuesday evening. At this time the John Fritz medal award will be made to Dr. Elmer A. Sperry, New York. The annual banquet will be served on Wednesday evening, while Thursday evening has been set aside for college reunions.

A feature of the convention sessions will be the Robert Henry Thurston lecture on Tuesday afternoon. "Latest Discoveries in Chemistry of Coal," is the title of the lecture which is to be presented by Dr. Cecil Howard Lander, director, fuel research, department of scientific and industrial research, London. The Henry Robinson Towne lecture will be delivered on Thursday afternoon with the speaker and subject to be announced later. The tentative program as just announced for the meeting is as follows:

**Tuesday, Dec. 7**

MORNING

Meetings of industrial power, textile and wood industries sections and power test code hearing.

AFTERNOON

Meetings of fuels and railroad sections. Joint meeting of American Society of Mechanical Engineers with American Society of Refrigerating Engineers and general session.
Robert Henry Thurston Lecture.

EVENING

Presidential address and reception.
Award of John Fritz Gold Medal.

**Wednesday, Dec. 8**

MORNING

*Fuels Section*

Paper: "Low Temperature Carbonization of Coal," by A. C. Fieldner.
Paper: "Distillation of Coal," by W. H. Blauvelt.
Paper: "Complete Gasification of Bituminous Coal," by R. S. McBride.

*Machine Shop Practice Section*

Paper: "A Research in the Elements of Metal Cutting," by Orlan W. Boston.
Paper: "Work-Hardening Properties of Metals," by Edward G. Herbert.
Paper: "Rough Turning with Particular Reference to the Steel Cut," by H. J. French and T. G. Digges.

*Materials Handling Section*

Paper: "Industry's Annual Tax for Materials Handling and Suggestions for Its Elimination," by H. V. Coes.
Paper: "Industrial Applications of Conveyor Systems," by C. A. Burton.

*General Meeting*

Paper: "Tests and Theory of Curved Beams," by A. M. Winslow and R. G. H. Edmonds.
Paper: "Internal Friction in Solids," by A. L. Kimball and D. E. Lovell.
Paper: "Stresses Occurring in the Walls of an Elliptical Tank Subjected to Low, Internal Pressures," by W. M. Frame.
Paper: "Stresses and Deflections in Large Dynamo Frames Due to Dead Load," by M. Stone.

AFTERNOON

Business meeting and general session.

*Education and Training for Industries*

Paper: "Educational Training for Industry," by Mathew Woll.
Paper: "Trades Training," by Carl S. Coler.

EVENING

Annual dinner.

**Thursday, Dec. 9**

MORNING

*Management Section*

Paper: "Laws of Manufacturing Management," by L. P. Alford.
Paper: "Production Control," by C. G. Stoell.

*Machine Shop Practice Section*

Paper: "Theory of Milling Cutters," by N. W. Sawin.
Paper: "Chromium Plating," by William Blum.

AFTERNOON

*Management Section*

Joint meeting Taylor society. Topic: "Problems of Organization."
Paper: "Railroad Organization," by J. C. Clark.
Paper: "Vitalizing versus Centralizing Organizations," by R. E. Newcomb.
Paper: "Problems of Bank Organization," by H. A. Hopf.

Henry Robinson Towne Lecture.

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One of the recent publications of the department of commerce, Washington, is a Spanish-English edition of "Standard Specifications for Steel Castings," prepared in co-operation with the bureau of standards and American section of inter American high commission. It is known as Industrial Standards No. 17 and may be secured from the government printing office, Washington, for 5 cents a copy.

## Convention Calendar

**Nov. 15-16—Foundry Equipment Manufacturers association.** Fall meeting at Ambassador hotel, Atlantic City, N. J. H. Cole Estep, 1213 West Third street, Cleveland, is secretary.

**Nov. 16-18—American Welding society.** Fall meeting at Broadway auditorium, Buffalo. M. M. Kelly, 33 West Twenty-ninth street, New York, is secretary.

**Nov. 17-18—National Founders' association.** Annual meeting at Hotel Astor, New York. J. M. Taylor, 29 South LaSalle street, Chicago, is secretary.

**Dec. 6-9—American Society of Mechanical Engineers.** Annual meeting at Engineering Societies building, New York. Calvin W. Rice, 29 West Thirty-ninth street, New York, is secretary.

**Dec. 6-11—Fifth National Exposition of Power and Mechanical Engineering** at Grand Central Palace, New York. Charles F. Roth, Grand Central Palace, New York, is manager.

## Foundrymen Told How To Produce Hot Iron

Necessity for developing new uses for gray iron castings was stressed by Dr. Richard Moldenke in an address before the Newark Foundrymen's association, Newark, N. J., recently. He suggested greater research work, the employment of technically trained men in the higher positions and a greater use of alloys as among important requirements to this end.

Dr. Moldenke reviewed conditions among the European foundries as he had found them upon a trip earlier in the year, and declared that they are doing much more with alloys than gray iron foundries in this country; also that technical men, from the foreman up, were the rule. Research work also was much in evidence; and by the combination of these factors, the speaker declared, the foreign foundries have been able to check the inroads of the pressed steel and forging manufacturers to a much greater extent than the foundries here. He declared that the export business they are doing is a revelation.

Discussing foundry practice in general, the speaker believed that some interesting developments were coming along in the production of hot iron. The best iron, he stated, is that which is exceedingly superheated. He described some foreign experiments in the development of this metal, and for those men who were doing anything in hot iron at the present, he warned that it was highly essential that the metal not be poured too quickly.

He believed that shadow tests in coke specifications were essential to the production of the best possible iron; also that microscopic tests are somewhat over emphasized and that brinell hardness tests in cast iron should be discouraged. With almost 100 present, the meeting was one of the best in the history of the association. President Carter outlined the activities of the association in its cost and apprenticeship work and declared that the matter of credit exchange information would be taken up at once. Morden Grindal, Norwegian Foundrymen's association, spoke briefly of the industry in Norway.

# Here and There in Industry

**Live Information Which Records the Expansion of Various Lines of Productive Enterprise**

CHAIN BELT CO., Milwaukee, has started work on a new engineering building at its West Milwaukee works, which will house the steel fabricating and assembly departments, drafting room and general contract engineering offices. As a self-contained unit, the new shop will be devoted exclusively to the manufacture of contract engineering work, including conveyors, elevators, traveling water screens, bunkers and hoppers. It is the third major unit of the new manufacturing group at Thirty-ninth avenue and Burnham street, in West Milwaukee, on a 59-acre tract, which eventually will supplant the present works at Park street and the Sixteenth street viaduct. The building will be 120 x 308 feet, with an office division 144 feet wide, and will be equipped with eight traveling cranes and considerable other equipment. At its completion, the present space devoted to the contract department will be added to the chain manufacturing unit. About 50 per cent of the Chain Belt organization will be located at the West Milwaukee works when the present extension is ready.

* * *

ILISOWITZ & SON., Johnstown, Pa., dealers in iron and steel scrap, have bought a block with railroad frontage and will build a scrap handling plant, equipped with weighing, baling, cutting and conveying machinery.

* * *

INCREASED business of the Wheeling Steel Corp., Wheeling, W. Va., has resulted in the announcement that the LaBelle tin plate plant, idle for two years, will resume operations Dec. 1. Resumption of the plant means immediate employment of 600 men, and probably more at a later date.

* * *

CRESCENT WASHING MACHINE CO., manufacturer of electric dish and glass washers, New Rochelle, N. Y., will be operated in future as a division of the Hobart Mfg. Co., Troy, O. No change will be made in the company's products or methods.

* * *

BIRMINGHAM MACHINE & FOUNDRY CO., Birmingham, Ala., George M. Morrow, president, has added to its line of products an automobile lifter for garage and repair shop use. Its other products are cotton presses, gasoline pumps, sugar refining machinery, soil pipe and fittings and general castings.

* * *

GOLDEN GATE FERRY CO., San Francisco, has given a contract to the Ingersoll-Rand Co. for nine 6-cylinder, 400-brake horsepower marine solid injection oil engines for three diesel electric ferryboats. Each engine will be direct connected to a Westinghouse generator and exciter. Each ferryboat will be 240 feet long with capacity for 85 automobiles, of double end type with two propulsion motors.

* * *

AMERICAN BRIDGE CO. has sold to the Heppenstall Forge & Knife Co. about 268 x 509 feet, with iron clad and brick mill buildings on Harrison street between Forty-seventh and Forty-eighth streets, Pittsburgh. Two lots, 20 x 100 feet, from Harrison street to Plum way, were also included. This property was formerly known as the Shiffler Bridge works. The Heppenstall company is owner of considerable adjoining property.

* * *

WESTINGHOUSE ELECTRIC & MFG. CO., East Pittsburgh, Pa., has established a service shop at Fairmont, W. Va., to handle repairs on electrical apparatus, particularly industrial and mine motors. It is in charge of R. M. Bayle, service manager. The shop facilities occupy 3200 square feet with 4800 square feet for other purposes. The shop is equipped with lathe, banding lathe, coil puller and coil winding machine, 200-ton press, drill press, commutator slotting machine, electric oven, test boards, dip tanks, insulation shear, and test sets.

* * *

RUSS MFG. CO., Cleveland, manufacturer of soda foundation equipment, has added to its official family Ira Krupnick, vice president and sales manager of Albert Pick & Co., Chicago, Glen P. Cowan, formerly president of the Nizer Corp., Detroit, and S. R. Livingstone, of Livingstone & Co., investment banker, New York. Election of officers resulted in Judge Edwin J. Blandin being retained as president, William H. DuRoss vice president and general manager and P. W. Schmitt secretary and treasurer. Messrs Krupnick and Cowan were elected vice presidents. The directors include these officers and C. E. Blandin, J. S. Schlenker, William Streigel and S. R. Livingstone.

## Bar Iron Mill Wages Are Unchanged

**Bar iron mill workers' wages will remain unchanged in November and December, the average sales price of bar iron in September and October having been 2.00c, the same as since last November and December. The puddling rate continues $11.38. Wages of finishing mill workmen remain at about 30 per cent above base. The average sales price for the preceding two months was determined at a meeting of representatives of the Western Bar Iron association and Amalgamated Association of Iron, Steel and Tin Workers in Pittsburgh last week. Following is a comparison of price averages since 1921:**

| | 1926 | 1925 | 1924 | 1923 | 1922 |
|---|---|---|---|---|---|
| Jan.-Feb. | 2.00c | 2.00c | 2.35c | 2.25c | 1.60c |
| Mar.-April | 2.00c | 2.05c | 2.35c | 2.35c | 1.50c |
| May-June | 2.00c | 2.05c | 2.25c | 2.50c | 1.60c |
| July-Aug. | 2.00c | 1.95c | 2.15c | 2.50c | 1.70c |
| Sept.-Oct. | 2.00c | 1.95c | 2.10c | 3.40c | 1.95c |
| Nov.-Dec. | ..... | 1.95c | 2.05c | 2.35c | 2.20c |
| Yearly av. | ..... | 1.99c | 2.21c | 2.30c | 1.76c |

## Paying Workers for Their Group Efficiency

A booklet analyzing the operation of the group bonus labor payment plan, entitled "The Better Wage", has been issued by Ernst & Ernst, auditors and business service specialists, New York. Workers are assembled into groups, and each worker is guaranteed the payment of an hourly base rate for his time, regardless of his production. If the efficiency of the group as a whole for a pay period is 75 per cent of a standard each of its members receives 1 per cent of his base rate earnings as an additional wage or bonus. The bonus increases with efficiency. This is similar to the plan adopted by a British foundry during the war, the result of which received widespread attention. The principle is that a worker is paid for a certain operation, and can be paid more for co-operation resulting in group efficiency.

## British Labor Idling

(*Concluded from Page* 1204)

ginning in September was 16; in addition 17 disputes were still in progress at the beginning of the month. The total number of workpeople involved in the 33 disputes was about 2000 and the estimated aggregate duration of such disputes about 15,000 working days.

## British Export Prices Show Wide Range

London, Oct. 26.—(*European Staff Service*)—Board of trade returns for September 1926 give average British export prices per gross ton for a number of iron and steel products, compiled from actual contracts which were made several months ago. This accounts for the difference between these quotations and the base prices regularly quoted in IRON TRADE REVIEW.

The following table shows the price of each of the seven principal commodities exported from Great Britain. Compared with prices prevailing in September 1925, there was an increase this year on foundry pig iron, beams, tinplate and plates, and a considerable increase on carbon billets. There was a decrease on ferroalloys and galvanized sheets. Prices for September this year, compared with those of the preceding month, show a decrease on foundry pig iron, beams, galvanized sheets, tinplate, a considerable increase on carbon billets and slightly higher prices for ferroalloys and plates.

The price of foundry pig iron was 1s 5d (35 cents) less than in August this year and 3s 4d (80 cents) more than in September 1925. Ferroalloys were 26s ($6.30) more than in August this year and £5 16s 5d ($28.10) less than in September 1925. Carbon billets were £15 12s ($75.50) more than in August this year and £16 19s ($82) more than in September 1925; this considerable difference is due to the famine of semifinished steel caused by the coal stoppage. Beams were 18s ($4.35) less than in August this year and 39s 8d ($9.60) more than in September 1925. Galvanized sheets were 11s 5d ($2.77) less than in August this year and 17s 7d ($4.25) less than in September 1925. Tinplate was 11s 2d ($2.70) less than in August this year and 15s 10d ($3.80) more than in September 1925. Plates were 32s ($7.70) more than in August this year and £3 2s 8d ($15.19) more than in September 1925.

| | £ | s | d | $ |
|---|---|---|---|---|
| Foundry pig iron | 4 | 13 | 7 | 22.60 |
| Ferroalloys | 11 | 13 | 0 | 56.45 |
| Carbon billets | 30 | 12 | 0 | 148.00 |
| Beams | 11 | 8 | 0 | 55.10 |
| Galvanized sheets | 17 | 12 | 7 | 85.20 |
| Tin plate | 22 | 0 | 7 | 106.50 |
| Plates | 13 | 18 | 0 | 67.20 |

## Luxemburg Production Is Below High Mark

Brussels, Oct. 9.—(*European Staff Service*)—Production of pig iron in Luxemburg during August, although below that of June and July, maintained a good average. The August figure was 209,549 metric tons, against 211,279 tons in July, the highest mark having been reached in March with 212,729 tons.

August output of steel was 184,280 metric tons, compared with 191,538 tons in July. The maximum output was reached in March with 195,784 tons. August output included 182,301 tons of basic bessemer steel, 1265 tons of open-hearth steel and 714 tons of electric steel. The following table gives figures for the first eight months of the year, compared with the monthly averages of the three preceding years and 1913. in metric tons:

| Mon. ave. | Pig iron | Steel ingots and castings |
|---|---|---|
| 1913 | 212,320 | 110,500 |
| 1923 | 177,220 | 100,100 |
| 1924 | 181,100 | 157,195 |
| 1925 | 195,335 | 173,690 |
| 1926 | | |
| Jan. | 203,673 | 173,875 |
| Feb. | 185,098 | 170,447 |
| March | 212,729 | 195,784 |
| April | 196,651 | 180,528 |
| May | 194,896 | 169,756 |
| June | 211,251 | 190,354 |
| July | 211,279 | 191,538 |
| Aug. | 209,549 | 184,280 |

# British Exports Almost at Minimum

BIRMINGHAM, Eng., Oct. 26.—(*European Staff Service*)—The British board of trade's return for September shows a total export of iron and steel products, including scrap, of 162,437 tons, compared with 170,108 tons in August and 277,891 tons in September last year. Imports including scrap amounted to 456,536 tons compared with 320,886 tons in August and 203,015 tons in September last year.

In exports the total of 5820 tons of pig iron exported compares with 14,423 tons a year ago or just over one-third. The United States, which a year ago took 1825 tons of pig iron, received none this year, but France took 1032 tons and Belgium 2985 tons. The effect of the coal stoppage is shown in substantial decreases, bars, rod, angles, etc., totaling 9261 tons against 9198 in the previous month and 18,690 tons a year ago. The export of 10,224 tons of plates and sheets under ⅛-inch thick compares with 9918 in the previous month and 19,115 tons a year ago. The best export item was galvanized sheets, 42,961 tons, which compares with 38,539 tons in August and 51,310 tons last year. Most of the figures compare badly with the previous month, but it is noteworthy that the chief exports are those in which re-rolling from foreign steel has been extensively carried out.

Large increases are reported under several heads of imports. Forge and foundry pig iron has gone up with a bound from 19,211 tons in August to 46,337 tons in September. Basic pig iron has increased from 8569 tons to 15,110 tons. The importation of 10,832 tons of scrap, nearly double that of August, is a somewhat surprising item, though some of this scrap may have been in useable form for rerolling instead of billets. Steel billets have reached the large total of 99,145 tons against 85,692 tons in August and 53,128 tons a year ago. Steel girders show a big increase from 14,108 tons in August to 19,668 tons in September, and plates and sheets have increased from 27,930 tons to 38,438 tons.

Coke and manufactured fuel registered the ridiculous total of 89 tons against 261,657 tons exported last year. The figure for August was 3051 tons, but imports of coke were 130,490 tons, against 39 tons a year ago. Imports of coal were 3,940,880 tons, against 3,970,442 tons in August and 295 tons a year ago. The coal export business has nearly disappeared, although a slight improvement is shown in the month. Coal exported in September was 5225 tons, compared with 2184 tons in August and 3,902,006 tons in September last year. The slight recovery is possible due to tht reopening of some of the exporting pits.

General exports were valued at £50,680,003 compared with £49,786,744 in August and £60,734,868 in September last year.

The value of the general imports was £101,724,341 compared with £101,137,290 in August and £97,934,748 in September last year.

## Belgian Steel Exports Up; Imports Less

Brussels, Oct. 26.—(*European Staff Service*)—Export of pig iron and steel from Belgium and Luxemburg during July declined. Exports of pig iron were 10,413 metric tons, against 11,184 tons in June, 13,438 tons in May, and 16,669 tons, which was the highest figure reached this year, in April. All these figures, however, are higher than the monthly average for last year. Exports of steel in July were 224.890 metric tons, compared with 260,896 tons in June. The July figure is below the monthly average of 1925.

Imports of pig iron into Belgium and Luxemburg in July were 26,057 metric tons, against 29,603 tons in June. Imports of steel were 23,705 metric tons, compared with 30,687 tons in June. The following table gives figures for the first seven months of the year, compared with the monthly averages of 1925, in metric tons:

| Monthly average | IMPORTS | | EXPORTS | |
|---|---|---|---|---|
| | Pig iron | Steel | Pig iron | Steel |
| 1925 | 27,095 | 15,860 | 8,060 | 242,325 |
| 1926 | | | | |
| Jan. | 24,319 | 24,483 | 5,411 | 184,556 |
| Feb. | 24,519 | 21,044 | 8,552 | 244,755 |
| March | 28,442 | 32,129 | 14,383 | 251,431 |
| April | 29,661 | 20,389 | 16,669 | 269,672 |
| May | 24,983 | 19,796 | 13,438 | 198,290 |
| June | 29,603 | 30,687 | 11,184 | 260,896 |
| July | 26,057 | 23,705 | 10,413 | 224,890 |

# Deportation Act To Be Pushed

## Department of Labor Regards It As Immigration Legislation Most Likely To Be Enacted by Congress Next Session—Alien Registration Is Again Urged—Quotas Stand Little Chance of Revision

By L. M. Lamm

WASHINGTON, Nov. 2.—What, if any, immigration legislation may be passed at the forthcoming session of congress is problematic. The most likely, and considered the most important bill now pending, is what is known as the deportation act, which has already passed the house and is now pending before the senate committee on immigration, of which Senator Hiram Johnson, of California, is chairman.

This bill practically rewrites the present authority of the department of labor as to deportation and tightens up present laws. The bill is favored by the department. Also pending before the same committee are some 20 other immigration bills, none of which is of great importance. A number of immigration bills are also before the house committee on immigration, of which Representative Albert Johnson, of Washington, is chairman. One provides that Mexico and Canada shall be put on a quota basis with other foreign countries. Such action was recommended to congress at the last session by the secretary of labor and the commissioner general of immigration. There seems to be little chance that the quota question will be opened at the coming session, which is what is known as the short session and adjourns in March. No vital changes in the immigration law are expected at this session.

### Cheap Labor Day Ended

Harry E. Hull, commissioner general of immigration, feels that by cutting down the admission of aliens to this country the day of cheap labor has gone by. He pointed out recently that the flood of immigration which reached the height of 1,285,349 in 1907 had so subsided in the last two fiscal years that the figures were 294,314 for 1925 and 304,488 for 1926.

"The United States perhaps more than any country has felt the evils of unregulated and unrestricted immigration, the reason being that the institutions of this country particularly attracted people of less fortunate countries," said Mr. Hull. "The United States has been virtually compelled to seek a solution of the difficulty inherent in this problem. It took a great many years to get to the point where our people and our legislature saw clearly that a remedy must be forthcoming, if our own well-being was to continue. In fact, without restricted immigration we undoubtedly would have been submerged by foreign peoples."

Mr. Hull pointed out that there has been a great deal of interest recently, in fact a public demand for the removal of aliens unlawfully here, who have either entered without compliance with the laws or have become inmates of public institutions after entry and should be returned to their country of origin. This led to the introduction of the new deportation bill.

"The past year has been the greatest in immigration history in the number of aliens thus removed on departmental warrant," said Mr. Hull. "The rate at which undesirable aliens were sent to their home countries was nearly 1000 each month. We have between 5000 and 6000 warrant cases now before the bureau and department for review. When the merits of each are determined by the reviewing officers, deportation warrants will be issued in all these cases in which the law requires that action be taken.

"A lawful means should be created whereby all aliens who entered unlawfully at a time before the quota acts became operative, and who have remained in the country and are now found to be of the admissable type upon examination by immigration officials, may make application to have their presence here legalized with a view to their ultimate naturalization as citizens of the United States. That method would, I believe, do no violence to existing laws and would remove a considerable menace."

### Would Register All Aliens

It is understood that the secretary of labor in his report to the President, which is ultimately sent to congress, will recommend legislation to provide for a countrywide registration of all aliens now in the United States, with a similar provision for future registration of newcomers within a stipulated time after entry.

In addition, it is also understood that the secretary wants an addition to existing measures calling for deportation of aliens. And he feels that

The author is editorial representative of IRON TRADE REVIEW at Washington.

## Aliens Admitted and Departed in 1926

| Countries | —Immigrant— Fiscal year, 1926 | July, 1926 | —Emigrant— Fiscal year, 1926 | July, 1926 |
|---|---|---|---|---|
| All countries.. | 304,488 | 22,283 | 76,992 | 7,052 |
| Total Europe | 155,562 | 7,885 | 60,040 | 5,708 |
| Albania | 158 | 10 | 314 | 19 |
| Austria | 1,102 | 44 | 487 | 60 |
| Belgium | 718 | 36 | 491 | 61 |
| Bulgaria | 175 | 22 | 88 | 17 |
| Czechoslovakia | 2,953 | 237 | 2,301 | 215 |
| Danzig, Free City of | 210 | 7 | 1 | ..... |
| Denmark | 2,549 | 115 | 691 | 64 |
| Esthonia | 132 | 8 | 15 | 3 |
| Finland | 491 | 26 | 519 | 64 |
| France, including Corsica | 4,181 | 203 | 1,011 | 184 |
| Germany | 50,421 | 1,623 | 3,908 | 403 |
| Great Britain and Northern Ireland: | | | | |
| England | 10,599 | 574 | 4,921 | 689 |
| No. Ireland | 419 | 11 | 208 | 82 |
| Scotland | 13,661 | 663 | 1,332 | 287 |
| Wales | 1,268 | 63 | 37 | ..... |
| Greece | 1,121 | 129 | 5,164 | 419 |
| Hungary | 906 | 49 | 871 | 76 |
| Irish Free State | 24,478 | 1,612 | 851 | 182 |
| Italy | 8,253 | 1,160 | 19,980 | 1,412 |
| Latvia | 298 | 12 | 58 | 1 |
| Lithuania | 636 | 33 | 408 | 42 |
| Luxemburg | 127 | 8 | 7 | ..... |
| Netherlands | 1,753 | 116 | 379 | 48 |
| Norway | 5,756 | 97 | 2,087 | 109 |
| Poland | 7,126 | 398 | 2,881 | 334 |
| Portugal | 666 | 39 | 2,926 | 158 |
| Rumania | 1,211 | 46 | 1,404 | 168 |
| Russia | 1,766 | 45 | 181 | 25 |
| Spain | 326 | 48 | 2,465 | 179 |
| Sweden | 8,513 | 169 | 1,150 | 123 |
| Switzerland | 1,994 | 143 | 486 | 68 |
| Turkey in Europe | 210 | 20 | 30 | 2 |
| Yugoslavia | 1,059 | 97 | 2,342 | 213 |
| Other Europe | 326 | 27 | 46 | 1 |
| Total Asia | 3,413 | 361 | 4,931 | 380 |
| Armenia | 16 | ..... | 43 | 3 |
| China | 1,751 | 148 | 2,989 | 268 |
| India | 93 | 5 | 113 | 15 |
| Japan | 654 | 80 | 1,208 | 47 |
| Palestine | 250 | 31 | 173 | 17 |
| Persia | 56 | ..... | 27 | 2 |
| Syria | 429 | 69 | 208 | 14 |
| Turkey in Asia | 21 | 12 | 126 | 12 |
| Other Asia | 143 | 16 | 44 | 2 |
| Total America | 144,393 | 13,946 | 11,485 | 889 |
| Canada | 91,019 | 7,239 | 2,173 | 81 |
| Newfoundland | 2,349 | 214 | 283 | 49 |
| Mexico | 43,316 | 5,726 | 3,198 | 261 |
| Cuba | 2,281 | 310 | 1,922 | 139 |
| Other W. Indies | 941 | 49 | 1,917 | 191 |
| British Honduras | 39 | 4 | 45 | ..... |
| Other Central America | 1,335 | 141 | 521 | 72 |
| Brazil | 877 | 60 | 210 | 10 |
| Other South America | 2,230 | 203 | 1,215 | 86 |
| Other America | 6 | ..... | 1 | ..... |
| Total others | 1,120 | 91 | 536 | 75 |
| Egypt | 214 | 15 | 38 | 3 |
| Other Africa | 315 | 30 | 88 | 8 |
| Australia | 376 | 34 | 257 | 34 |
| New Zealand | 180 | 9 | 134 | 15 |
| Other Pacific islands | 35 | 3 | 19 | 15 |

the 5-year statutory limitation upon the deportation of alien criminals should be removed, and this cause for deportation made a continuing one.

Section 11 of the immigration law provides at present for an annual quota for each nationality of 2 per cent of the number of foreign-born individuals of such nationality resident in continental United States as determined by the census of 1890, with a minimum quota of 100, and further provides that beginning July, 1927, and for each fiscal year thereafter, the allotment shall be determined according to national origin.

The secretary is of the opinion, it is understood, that the present method of ascertaining the quotas is far more satisfactory than the proposed determination by national origin, that it has the advantages of simplicity and certainty. He believes that the proposed change will lead to great confusion and result in complexities, and accordingly it is understood that he will recommend that the pertinent portions of section 11, providing for this revision of the quotas as they now stand, be rescinded. One of the most important recommendations to the forthcoming congress by the secretary will be, however, the placing of both Mexico and Canada on the quota basis along with other foreign countries.

The department's figures show that in July 81 iron and steel workers came into the United States and 20 left. Also, in the fiscal year ended July, 1926, 1469 iron and steel workers came into the country and 120 left.

Accompanying is a table prepared by the department which shows immigration and emigration into and from the United States in the fiscal year 1926, together with the same figures for July, which are the latest available.

## Suspends Chicago Rates

Washington, Nov. 2.—The interstate commerce commission has announced that it has suspended until Feb. 17 the operation of certain railroad schedules which propose to increase rates on iron and steel articles, in carloads, between points in the Chicago switching district.

The commission illustrates its announcement by stating that the present rate on one line per 100 pounds is 2.5 cents and that the proposed rate would be 3 cents with a carload minimum weight of 60,000 pounds. On another line the present rate is 2.5 cent and the proposed would be 5.5 cents subject to an alternate rate of 8 cents per 100 pounds, carload minimum weight 36,000 pounds. On a third line the present rate is 3 cent per 100 pounds with the proposed rate 6.5 cents subject to the same alternate rate as the preceding.

## Markets New Recuperator

The refractory division of the Carborundum Co., Perth Amboy, N. J. has been licensed to sell the Fitch type recuperator. The recuperator design is adapted to reversing and nonreversing furnaces. Some of the important features of the design are the use of heat resisting refractory tubes and long life of tubes when used with high-temperature furnaces.

# Point to New England Opportunities

FEELING that the progress in the foundry and machine shop industries of New England has not been all that it should be during the past few years, a committee of representative manufacturers under the direction of the Boston chamber of commerce, has just completed a survey of the metal working industries of the district, with recommendations for the future.

"New England, due to age, comparative area, physical characteristics, location, and the character of population," says the report, "is essentially a manufacturing community. Its prosperity as a whole springs from its successful industries. The well-being of every individual is dependent directly or indirectly upon industry. At the time of the last census in 1923, New England with 7 per cent of the population produced 10.6 per cent of the total sales value of products manufactured in the entire United States. New England furthermore is particularly adapted to the manufacture of metal products, especially those requiring a high degree of fabrication. It turned out in 1923 14.2 per cent of the foundry and machine shop products of the country."

The report points to the necessity of stabilization of business by coordination of manufacturing, marketing and organization. The committee recommends among other things that the metal working industries of New England:

"Recognize that, with equitable transportation rates, distance from sources of raw material or markets is not an insuperable barrier to continuous growth of these industries.

"Increase relative production of highly fabricated yet standardized products, to further minimize the percentage of transportation cost and thus take advantage of regional skill.

"Stabilize production through diversification of lines of product and of market.

"Investigate the possibilities of mergers based on sound principles of economy.

"Analyze markets critically to form an adequate basis for manufacturing and sales policies.

"Develop export fields through systematic plans.

"Seize the advantages of water shipment to Atlantic and Pacific U. S. ports.

"Adopt and develop standards of labor performance which would increase skilled labor, increase earnings of workers and lower production costs.

"Develop supply of skilled labor. through systematic training.

"Introduce budgeting methods.

"Develop effective production control to facilitate deliveries and assure regularity of operation.

"Introduce modern cost accounting principles even in the smallest plants, to properly determine both direct and indirect costs and aid in the fixing of sales prices.

"Examine plant to see what equipment should be replaced to produce highest possible quality and quantity at lowest cost.

"Adopt an open-minded attitude to change so as to overcome the stagnation due to tradition and to assure more effective methods of production and distribution."

The members of the special committee in charge of this survey are: Philip M. Tucker, chairman, Philip M. Tucker Co., Boston; John G. Aldrich, New England Butt Co., Providence, R. I.; E. H. Ballard, General Electric Co., Lynn, Mass.; E. P. Blanchard, Bullard Machine Tool Co., Bridgeport, Conn.; H. P. Blumenauer, Arcade Malleable Iron Co., Worcester, Mass.; Howard Coonley, Walworth Co., Boston; George A. Cutter, Thomson Electric Welding Co., Boston; Paul C. DeWolf, Brown & Sharpe Mfg. Co., Providence, R. I.; John J. Duggan, Chapman Valve Co., Springfield, Mass.; Ralph E. Flanders, Jones & Lamson Machine Co., Springfield, Vt.; M. J. Hastings, Reed-Prentice Co., Worcester, Mass.; H. B. Johnson, General Fire Extinguisher Co., Providence, R. I.; Robert A. Leeson, Universal Winding Co., Boston; Thorvald S. Ross, Rivett Lathe & Grinder Corp., Brighton, Mass.; Joseph B. Sessions, Sessions Foundry, Bristol, Conn.; Henry K. Spencer, the Blanchard Machine Co., Cambridge, Mass.; Frank M. Weymouth, Hunt-Spiller Mfg. Corp., South Boston; Walter M. White, Vermont Snath Co., Springfield, Vt.

# Construction and Enterprise

## Concise and Timely Business Building Opportunities from the Field of Industry

*Where additional information is presented, reference is made to date of issue in which previous item appeared.*

CHICAGO—New City Iron Works, 5401 South Western boulevard, will build a 1-story addition 95 x 191 feet. Divell & Netz, 307 North Michigan avenue, are architects.

CHICAGO—Beckwith Ironworks Inc., 544 West Seventy-ninth street, has been incorporated with $25,000 capital to manufacture structural and ornamental iron work by Arthur Beckwith, Lillian M. Beckwith and Parker H. Ayers. Ernest C. Reniff, 155 North Clark street, is attorney.

CHICAGO—National Road Machinery Co., 139 North Clark street, has been incorporated with $10,000 capital to manufacture road paving machinery and equipment by Fred T. Wright, A. G. Lampman and Frank Novotny, care Illinois Concrete Sales Co., 139 North Clark street.

CHICAGO—Capital Mfg. Co., 5850 South Racine avenue, has been incorporated with $25,000 capital to manufacture electrical devices and supplies by Henry J. Grieshaber, Henry L. Vogel and George A. Grieshaber. George J. Irving, 5927 South Loomis street, is correspondent.

CHICAGO—Temme Spring Corp., 55 East Twenty-eighth street, has been incorporated with $25,000 capital and 250 shares no par value to manufacture automobile springs, parts and accessories by Walter E. Mann, Leo S. Martmont and Herman G. Kastilan. Wolfsohn & Fireman, 110 South Dearborn street, suite 806, are correspondents.

CHICAGO—Vacuum Snubit Corp. 220 South State street, has been incorporated with $200,000 capital to manufacture automotive vehicles, motors, engines, machines and supplies and engineering apparatus and appliances, by R. A. Stearns, O. L. Bihlmire and William J. Serpas. McKinley & Price, 166 West Jackson boulevard, are correspondents.

MOLINE, ILL.—Standard Calorimeter Co., S. W. Park president, has let contract to Axel Carlson Co., Peoples Bank building, for a 1-story foundry building 60 x 120 feet at Second avenue and Fifty-second street.

TAYLORVILLE, ILL.—Chicago & Illinois Midland railroad, M. Dauley general manager, is having plans made for a 1-story extension to its car shops 50 x 200 feet.

FORT WAYNE, IND.—Fred Farmer Fort Wayne Co. has been incorporated with $10,000 capital to manufacture electrical appliances and machinery by Fred R. Farmer, Edward C. Kurman and Philip R. Holland.

INDIANAPOLIS, IND.—Interstate Car Co. is adding a cupola and other equipment to its foundry.

INDIANAPOLIS—Reliance Specialty Co., 548 South West street, metal hoods manufacturer, has let contract to Universal Construction Co., 1925 Massachusetts avenue, for a 1-story plant 42 x 165 feet.

MUNCIE, IND.—Delaware Brass & Aluminum Co. manufacturer of brass and aluminum products, is building an addition to its plant to increase output.

CEDAR RAPIDS, IOWA—Speeder Machinery Corp., M. R. Ronk president, Fairfield, Iowa, has let contract to O. F. Paulson Construction Co., Granby building, Cedar Rapids, Iowa, for a 1-story factory unit 120x 243 feet.

DES MOINES, IOWA—Concrete Crib & Silo Co. will build a 1-story manufacturing plant at Eighth avenue SW and Ninth street. E. M. Cheeseman is the president.

MARSHALLTOWN, IOWA—Lenox Furnace Co. will build 1-story, 36 x 81 addition to manufacturing plant to provided additional storage for steel sheets. Another unit will be built next year.

MASON CITY, IOWA—Chicago, Milwaukee & St. Paul railroad company, H. E. Byram president, Union Depot, Canal and Jackson streets, Chicago, will build a 1-story machine shop 25 x 75 feet.

OSKALOOSA, IOWA—Iowa Valve Co. has awarded general contract to P. W. Sparks, for 1-story, 25 x 50 addition to manufacturing plant.

PELLA, IOWA—General contract has been awarded to Chas. Lautenbech & Son, Pella, for addition to municipal power plant. A. C. Kuyper is city clerk.

GOULDSBORO, LA.—Texas & Pacific railroad has let contract to the Ware Co., El Paso, Tex., for a locomotive house and other terminal improvements here.

HOMER, LA.—Louisiana & Northwest railroad is building new shop unit, 70x90 feet, to replace building recently destroyed by fire. W. H. Keller is master mechanic.

NEW ORLEANS, LA.—Ber Hopper Machine & Die Co. has added new heat treating unit addition to plant, 20x30 feet.

NEW ORLEANS, LA.—Canal Street Works, E. B. Ludwig, general manager, is building 60x200 foot addition to fabricating plant.

NEW ORLEANS, LA.—Truscon Steel Co. has steel and erecting contract for Woodward Wight & Co. 96x330 foot fabricating plant for concrete reinforcing bars.

NEW ORLEANS, LA.—Williams Engineering Co., 816 Howard street, has contract for erection of Cumberland Telegraph & Telephone Co. steel and stone office building, Bayonne & Poydras streets, to cost $500,000.

NEW ORLEANS, LA.—Service Machine & Iron Works, H. R. Rahn, manager, has completed and occupied new plant, 100x150 feet, at 1032 Magazine St. Company specializes in ornamental iron work.

NEW ORLEANS, LA.—Texas & Pacific railroad has let contract to Ware Co., El Paso, Tex. for construction of engine house and shop buildings at Gouldsboro, La. to cost $750,000. Additional trackage, costing $100,000 will be laid by company engineers.

NEW ORLEANS—Equitable Equipment Co., distributors and rebuilders of locomotives and heavy machinery, is completing an addition 150 x 150 feet for its machine shop and adding a new rail yard. New equipment will include a 40-ton electric crane.

SHREVEPORT, LA.—Tolbert-Efurd Welding & Machine Co., capital $25,000, incorporated by R. L. Efurd, president, E. C. Tolbert, vice president, and Francis Efurd to do general welding and machine work.

BALTIMORE—Tin Decorating Co., Linwood and Boston streets, Arthur A. Morse president, is building a 1-story addition 150 x 200 feet.

BOSTON—Thompson Wire Co., 41 Mildred avenue, Dorchester, Mass., is building a 1-story addition 65 x 150 feet.

BOSTON—Roberts Specialty Mfg. Co. Inc has been incorporated with $100,000 capital to manufacture hardware and supplies by Harry P. Roberts president, 296 Seaver street, Boston; Frederick E. Head treasurer, and Viola J. Goff.

BOSTON—Haymarket Electric Supply Co. Inc. has been incorporated with 200 shares no par value to manufacture electric and gas supplies and accessories by Samuel Role, president and treasurer, 148 Callender street, Dorchester, Mass. Maurice Role and Israel Cooper.

SPRINGFIELD, MASS.—Perfection Grate & Supply Co., 164 Birnie avenue will build a 1-story addition to its foundry.

SPRINGFIELD, MASS.—Perfection Grate & Supply Co., 164 Birnie avenue, is planning to build a 1-story foundry addition.

WORCESTER, MASS.—Mohawk Plastic Magnesia Corp. of New England has been incorporated with $10,000 capital to manufacture magnesia products and machinery for their production by C. D. Lamoureux president, Amedee J Lamoureaux, 575 Chandler street, Worcester, Mass., treasurer, and M. Lamoureux.

DETROIT—Morse Chain Co., Ithaca, N. Y., is building a 2-story addition to double its capacity here.

DETROIT—Ternstedt Mfg. Co., 6307 West Fort street, manufacturer of automobile hardware, will build a 3-story addition for which equipment will be required.

DETROIT—Komnick Machinery Co. has been incorporated with $50,000 capital to manufacture machinery and accessories by Louis Bollen, 1998 Waverly avenue, Detroit, Arthur Reinold, Sebewaing, Mich., and Franz Wawrousek, Albany, N. Y.

GRAND RAPIDS, MICH—Tannewitz Works Inc., manufacturer of saw benches, Edward Tannewitz president, has taken bids for a 1-story addition 50 x 100 feet.

HOWELL, MICH.—Howell Electric Motors Co. has let contract to the Bowyear Construction Co., Hillsdale, Mich., for a 1-story addition 40 x 200 feet. C. F. Norton is vice president.

NILES, MICH—Dual Co. has been incorporated with $10,000 capital and 70 shares no par value to manufacture iron and steel and other metals by Walter Harter, 311 East Main street, Niles, Arthur G. Stone and Philip Hadsell.

CROSBY, MINN.—Amherst Mining Co. has awarded general contract to Erick Olson for mine shop to house blacksmith, machine and tool shops.

MINNEAPOLIS—Manufacturing building at 233 Fifth avenue South, occupied by Minneapolis Plating Co., United States Pattern Co., and Twin City Brass & Aluminum Co., damaged by fire Oct. 5, is to be rebuilt immediately.

NASHWAUK, MINN.—Minnesota Power & Light Co. will build 110,000-volt line from Nashwauk to Hibbing and also install a new 7500-Kilovolt ampere synchronous condenser at Nashwauk.

ST. PAUL—St. Paul Roofing & Cornice Co. has awarded general contract to

Realty Service Co., for 1-story, 60x83 addition to factory building.

MINNEAPOLIS—Russell Grader Mfg. Co., manufacturer of road machinery, will build 2-story, reinforced concrete and steel addition to manufacturing plant at Twentieth and University avenue SE. Sund & Dunham, 512 Essex building, are the architects.

JACKSON, MISS.—Midget Lantern Works has been incorporated with $20,000 capital to manufacture lanterns by J. A. Teat, Texas building.

KANSAS CITY, MO.—Fred H. Fitch, president of Kansas City Structural Steel Co., is building garage and repair shop on site 112x248 feet which will include machine shop.

KANSAS CITY, MO.—Gille Mfg. Co., manufacturer of metal containers, has acquired two-story building, 120x438 feet, on Guinotte avenue for plant expansion. H. S. Gille, Jr., is secretary and general manager.

KANSAS CITY, MO.—Marion Steam Shovel Co., Marion, O., has purchased a site in Woodswether industrial district for new assembly plant. George W. Davidson, 1325 West Ninth street, is in charge of Kansas City branch.

KANSAS CITY, MO.—Arrowhead Iron Works, manufacturers of steel flooring, has leased two buildings on site 150 feet deep in Fairfax industrial district for new plant. W. L. Pattison is president.

KANSAS CITY, MO.—Dierks & Sons Lumber Co., Hans Dierks president, Nineteenth and Woodland, has let contract to Wisconsin Bridge & Iron Works, 1302 Commerce building, for a power plant 70 x 75 feet.

KANSAS CITY, MO.—Hurst Scrap Iron & Metal Co. is remodeling building, 250x460 feet, acquired from defunct Beggs Motor Car Co. and installing new foundry equipment for melting of nonferrous metals. Max Hurst, 8 West Tenth street, is president.

ST. LOUIS—Mueller Plastering Co. has been incorporated to manufacture plastering machinery and tools by Eugene Mueller, 4937 Sutherland street.

ST. LOUIS—A. Van Bergent Armature Service Co. has been incorporated with $10,000 capital by Anthony Van Bergen, 705 Central National Bank building.

ST. LOUIS—Medart Mfg. Co., Edward J. Medart president, 3535 DeKalb street, has let contract to J. H. Wise Construction Co., 911 Syndicate Trust building, for a foundry building and core room one story 50 x 300 feet.

ST. LOUIS—Atlas Tack Co., Fairhaven, Mass., has bought the plant of the St. Louis Trunk Hardware Mfg. Co. and will consolidate it with its plant at 3977 Union boulevard, continuing the latter company's line of manufacture.

BROOKLYN, N. Y.—Stockham Pipe & Fitting Co., 88 Thirty-ninth street, has bought site 200 x 305 feet at Hudson City, N. J., where a new plant will be built.

BROOKLYN—Krupp Specialty Mfg. Co. has been incorporated with $50,000 capital to manufacture hardware by H. C. Krupp, A. A. R. Berger and W. C. Schoppner. L. H. Goldstein, 378 Linden boulevard, is attorney.

BROOKLYN, N. Y.—Sterling Casket Hardware Co., 383 Kent avenue, has let contract to Eugene F. Warwick, Crescent Plaza building, Long Island City, N. Y., for a 1-story plant 210 x 310 feet at Maspeth, L. I.

BUFFALO—Buffalo Fabricators has been incorporated with $50,000 capital and 1000 shares common no par value to erect steel structures by W. G. Crosby, K. Chamberlain. E. C. Randall, Buffalo, is attorney.

LONG ISLAND CITY, N. Y.—Samson Cutting Die Co. has been incorporated with $25,000 capital by H. L. Samson, R. Samson and L. Notkin. G. Gruzen, Boston, is attorney.

NEW YORK—American Can Co. has let contract to Turner Construction Co. for a 6-story plant 125 x 200 feet, Forty-third street, Brooklyn.

NEW YORK—Globe Easy Lock Fastener Co. has been incorporated with $10,500 capital by C. Stone, S. Sahpiro and T. Mayer. B. Machinist, 277 Broadway, is attorney.

NEW YORK—Grand Metal Products has been incorporated with $30,000 capital by E. Alper, K. Heichman and E. D. Reedner. H. Pearlman, 63 Park Row, is attorney.

NEW YORK—Chelsea Model & Pattern Works has been incorporated with $5000 capital by L. Teale, P. Labowitz. G. A. Hennock, 105 West Forty-first street, is attorney.

NEW YORK—Rivoire Pipe & Tube Co. has been incorporated with $25,000 capital by D. S. Stern, H. J. Riviore and S. Siegel. G. A. Arkwright, 44 Court street, is attorney.

NEW YORK—Ogden Wireless Laboratories has been incorporated with $5000 capital to manufacture radio equipment by C. A. Bass, A. G. Lippincott and H. Lippincott. W. R. White, Municipal building, is attorney.

NEW YORK—Rosenberg & Ferber has been incorporated with $20,000 capital to manufacture machinery by A. Rosenberg, G. Ferber and H. Ferber. Lefenfeld & Sweet, 54 Nassau street, are attorneys.

NEW YORK—Automatic Linker has been incorporated with $250,000 capital to manufacture machinery and tools by V. H. Oechelin, V. V. Vass and J. F. Malarkey. A. H. Rosenfeld, 55 John street, is attorney.

BEATRICE, NEBR.—Black Bros., Beatrice, Nebr., will build a dam and power plant on Blue river near Beatrice to cost $150,000.

ERICSON, NEBR.—Nebraska Electric Power Co., Loup City, Nebr., contemplates addition to power plant at Ericson to cost $100,000.

FREMONT, NEBR.—Improvements will be made to municipal water and light plant including an addition, new machinery and a 110-foot chimney, to cost $100,000. A. J. Forman is city clerk.

OMAHA, NEBR.—Duplex Mfg. Co. Inc. has been incorporated with a capital of $50,000 by C. F. Betcke, 2416 Newport avenue, to manufacture road machinery.

JERSEY CITY, N. J.—J. Janitschek, 59 Lake street, is building a 1-story foundry addition 50 x 75 feet.

JERSEY CITY, N. J.—United Steel Construction Co. has been incorporated with 2000 shares no par value by Alfred F. McCabe, L. Krantino and Walter Varndell, Jersey City.

NEWARK, N. J.—William E. Quimby Inc., 5 Avenue C, manufacturer of electric pumps, has leased a 1-story plant, 110 x 250 feet, being built by the Manufacturers Developing Co. and will occupy it as its main plant.

NEWARK, N. J.—E. B. Kelly Co., 235 Halsey street, manufacturer of concrete machinery, has bought a site 50 x 147 feet at 293 Frelinghuysen avenue and will build a 2-story plant.

NEWARK, N. J.—Hansen VanWinkle Co., VanBuren and Chestnut streets, dynamos and motors, is preparing to equip the plant of the Atha Steel works which it recently bought, and will move its manufacturing there.

NEWARK, N. J.—Abwill Mfg. Co. has been incorporated with $125,000 capital to manufacture lighting equipment by Bert H. Colt, Abraham Goldberg and William Goldberg, Newark. Frederick J. Greenberg, Newark, is attorney.

NEWARK, N. J.—Rankin Foundry Co. Inc. has been incorporated with 1000 shares no par value by Courtland Palmer, East Orange; Harold D. Latham, Pequannoc; Antojnette Sachs, Brooklyn, N. Y. Hayes & Palmer, New York, are attorneys.

MINOT, N. DAK.—Bids are being received by E. B. Goss, for 2-story, 70 x 75 reinforced concrete and steel auto sales and garage building, to cost $50,000. Ira L. Rush is the architect.

MINOT, N. DAK.—C. I. Tenney, Des Moines, Iowa, has been granted a franchise by city to build gas plant and five miles of mains, to cost $250,000. George A. Reishus is city auditor.

CINCINNATI—Ault & Wiborg Co., C. A. Mansell secretary, 1754 Dana avenue is planning a factory addition of three to five stories.

CINCINNATI—Goldsmith Metal Lath Co., Max S. Goldsmith president, Third and Eggleston avenue, will build a 1-story plant 80 x 300 feet. Gustave W. Drach, 1701 Union Trust building, is architect.

CINCINNATI—Royal Blue Bed Spring Co., W. O. Lathrop president and general manager, has let contract to H. C. Hazen Construction Co., Reading road and Florence avenue, for a 1-story office and factory building 29 x 58 feet.

CLEVELAND—New York Central railroad, 466 Lexington avenue, New York, will build a 1-story car repair shop 25 x 200 feet at 152nd street.

CLEVELAND—High Arc Oil Burner Co. has been incorporated with $10,000 capital by Charles Schlenker, V. B. Hopkins, L. R. Corwin, R. E. Williams and A. C. Jones.

CLEVELAND—Cleveland Cap Screw Co., 2921 East Seventy-ninth street is adding another floor 20 x 60 feet to its plant and office building. H. M. Morse, Finance building, is architect.

CLEVELAND—Art in Bronze Co., R. E. Shephert manager, 1782 East Thirty-seventh street, has let contract to Mitzel Shields Contracting Co., 920 B. F. Keith building, for a 1 and 2-story foundry 34 x 125 feet and 34 x 70 feet.

DAYTON, O.—National Automat Service Inc. has been organized to manufacture an automatic vending machine and will establish a factory.

DAYTON, O.—International Tool Co., 138 Madison street, builder of special tools and machinery, J. J. Kohl president, is having plans made for a factory on a new site just bought.

DAYTON, O.—Delco Light Co. has let contract to Danis Hunt Co., Schwind building, for an acetylene production and storage building on Canal road, Moraine City. Schenck & Williams, Mutual Home building, are architects.

BARTLESVILLE, OKLA.—Empire Gasoline Co. has placed contracts with American Car & Foundry Co. and General American Car Co. for 60 insulated 8000-gallon capacity tank cars, 30 to each company.

BRISTOW, OKLA.—Hoffman Mfg. Co., capital $30,000, incorporated by W. G. Bisbee, G. McMillan and T. A. Barry to manufacture oil field drilling specialties.

OKLAHOMA CITY, OKLA.—J. B. Klein Iron & Foundry Co. has contract for concrete reinforcing bars for 12-story Perrine building, 125x140 feet. Company also awarded contract on 85 tons reinforcing steel for University of Oklahoma gymnasium.

SEMINOLE, OKLA.—Conway Bros. have established boiler and welding shop, 50x140 feet,

for repair of oil field boilers and drilling equipment. Jack Conway is manager.

TULSA, OKLA.—Empire Chandelier Mfg. Co., capital $50,000, incorporated by W. J. Smiley, 1924 West Brady street, C. B. Johnston and H. L. Steenson, to manufacture electrical specialties.

TULSA, OKLA.—Unite Lock Co., capital $250,000, chartered to manufacture locks and safes by R. F. Carr, 2236 East Eighth street, Max Adamson and John Wheeler. A 30-acre site has been acquired on Sand Springs road for a plant which will eventually include a foundry.

BEAVER FALLS, PA.—Ingram Richardson Mfg. Co., manufacturer of enameled iron signs, will build a 1-story addition 96 x 122 feet.

CHARLEROI, PA.—Charleroi Steel & Foundry Co., recently organized, has taken over the plant of the Electric Alloy Steel Co. and will enlarge and re-equip it. W. D. Myers is president.

JOHNSTOWN, PA.—Union Radiator Co., C. C. Good general manager, has let contract to the Wilson Construction Co., Johnstown Trust building, for a 1-story foundry addition 84 x 125 feet.

PHILADELPHIA—Bids are being opened by Philip S. Tyre, architect, for a manufacturing building for R. H. Greenburg, Hamilton, above Thirteenth street.

PHILADELPHIA—Contract for a $160,000 factory building for the Leeds & Northrup Co., 4901 Stenson street, has been awarded to William R. Dougherty, 1608 Sansom street.

PHILADELPHIA—Contract for a $25,000 plant addition for Van Shatten & Harvey, 137 Berkely street, has been awarded to I. W. Keeley, 4411 Germantown street.

PHILADELPHIA—Contract has been awarded by the Brewer Bros. Co., Second and Somerset streets, for a $13,000 factory building. Frank K. Stehl, 2711 North Park street, was the successful bidder.

PITTSBURGH—Heetrite Mfg. Co. has been incorporated with $5000 capital to manufacture heating devices by Howard M. Schmeltz Jr., 6630 Ridgeville street, Pittsburgh, James F. Coyle, 6323 Glenview place, and Laurence B. Hurst, 6671 Ridgeville street.

READING, PA.—Reading Iron Co. is building a 1-story addition 65 x 520 feet and 65 x 210 feet, the latter for a galvanizing department.

SINKING SPRING, PA.—Active Stove Mfg. Co. has been incorporated with $5000 capital to manufacture stoves, ranges and heating devices by Ephraim Witman, and Harry Stott, Sinking Spring, and J. M. Hertlein, 133 South Ninth street, Reading, Pa.

WILKES-BARRE, PA.—E. B. Flanigan Inc. has been incorporated with $5000 capital to manufacture vehicular brakes, motors and parts by E. B. Flanigan, 65 West South street, Katherine H. Flanigan and John Flanigan.

WILKES-BARRE, PA.—Brown Radio Mfg. Co. has been incorporated with $25,000 capital to manufacture radio sets and appliances by W. D. Brown, Kingston, Pa., Ralph M. Brown, Kingston, and J. P. Lors, Wilkes-Barre.

SPARTANBURG, S. C.—E. E. Child Co. has been incorporated with $150,000 capital to manufacture textile machine parts by E. E. Child and associates. Is equiping plant leased for temporary use.

SALEM, S. DAK.—Salem Milling, Lighting & Heating Co., L. V. Schneider, president, will build power plant at corner of Norton avenue and Idaho street and power line running north and northwest to Canova to connect with Dakota Public Service Co.

## Refractories

### FIRE CLAY BRICK

Per 1000 f.o.b. works

| | |
|---|---|
| Pennsylvania, No. 1 | $40.00 to 43.00 |
| Pennsylvania, No. 2 | 35.00 to 38.00 |
| Ohio, No. 1 | 40.00 to 43.00 |
| Ohio, No. 2 | 35.00 to 40.00 |
| Illinois, No. 1 | 40.00 to 43.00 |
| Illinois, No. 2 | 35.00 to 38.00 |
| Kentucky, No. 1 | 40.00 to 43.00 |
| Kentucky, No. 2 | 38.00 to 40.00 |
| Missouri, No. 1 | 40.00 to 43.00 |
| Missouri, No. 2 | 35.00 to 38.00 |
| Maryland, No. 1 | 40.00 to 45.00 |
| Maryland, No. 2 | 36.00 to 40.00 |
| Georgia and Ala. No. 1 | 40.00 to 45.00 |
| Georgia and Ala. No. 2 | 30.00 to 35.00 |

### SILICA BRICK

| | |
|---|---|
| Pennsylvania | 43.00 |
| Chicago | 52.00 |
| Birmingham | 52.00 |

### MAGNESITE BRICK

Per Net Ton Seaboard Base

| | |
|---|---|
| 9 x 4½ x 2½ | 45.00 |

### CHROME BRICK

(Per Net Ton)

| | |
|---|---|
| 9 x 4½ x 2½ | 65.00 |

AUSTIN, TEX.—Colorado River Hydro-Electric Co., capital 10,000 shares no par value, chartered by James Kennedy, Frank Kemp and E. B. Neiswanger to build hydroelectric plant near Aupstin on Colorado river.

BEAUMONT, TEX.—Ohmstede Machine Works, 897 N. Main, is adding 25x30 foot addition to machine shop for repair of automobiles.

BEAUMONT, TEX.—Pennsylvania Car Co. is making addition to fabricating plant, 75x340 feet, including crane runway of 280 feet, for structural steel fabricating.

DALLAS, TEX.—Dallas Iron Works has completed new machine shop 85x150 feet at Fourth and Oak Lane streets.

DALLAS, TEX.—Southwestern General Electric Co. has contract for one 6000-kilowatt Westinghouse generating unit and auxiliary pumps for Panhandle Power & Light Co. in Panhandle oil field. Insull interests have placed contract for one 15,000-kilowatt generating unit for power plant at Weleetka, Okla.

FORT WORTH, TEX.—Trinity Valley Iron & Steel Co. has completed new fittings plant for steel pipe in charge of George Basenberg, formerly with United States Cast Iron Pipe & Foundry Co., at Birmingham.

GALVESTON, TEX.—Knowles Iron Works has completed corrugated iron and steel plant, 62x85 feet, for fabrication of tanks and structurals.

HOUSTON, TEX.—Gray Tool Co., manufacturer of oil well drilling tools, has completed 30x90 foot addition to machine shop.

HOUSTON, TEX.—Marine Iron Works, Harrisburg, Tex., contemplates addition 54x60 feet to machine shop for repair of ship machinery.

HOUSTON, TEX.—Ship Channel Machine Shop, 2501 Grayson street, has completed first unit of new plant, 60x80 feet, and contemplates similar addition.

HOUSTON, TEX.—Markle Steel Co., capital 10,000 shares no par value, chartered by C. M. Markle, Elizabeth Markle and Charles Muir to do general importing and warehouse business in foreign steel and iron.

HOUSTON, TEX.—Texas Electric Steel Castings, 1515 Spring street, has remodeled old plant, 80x250 feet, and added foundry for making steel castings. F. A. Kroll is president and F. G. Sowden, vice president.

HOUSTON, TEX.—Myers-Spalti Mfg. Co., 2115 Runnels street, rebuilding power plant and machine shops in Lottman place. Contract to American Construction Co., Gulf building.

HOUSTON, TEX.—Humble Pipe Line Co. has placed contract with A. M. Lockett & Co. for a 400-horsepower diesel oil engine and a 5000-barrel triple forged oil line pump for its Comyne station. Contract was also closed with Houston P. & G. Co. for a 2000-horsepower water tube cooled walls boiler.

SAN ANGELO, TEX.—San Angelo Foundry & Machine Co., A. A. Koch president and general manager, has been organized and has taken over the plant and business of the San Angelo Foundry and Machine Co. Manufacture of power hammers, shears, pump jacks, vice posts and other devices will be continued.

SAN ANTONIO, TEX.—Reliance Automatic Signal Co. has been incorporated by E. W. Price, 326 Eleanor street.

VICTORIA, TEX.—City of Victoria is taking bids on machinery for the municipal waterworks, including two 100-horsepower boilers, two engine or electric operated pumps.

JANESVILLE, WIS.—A service supply building, 160 x 280 feet, will be erected here by the General Motors Corp. to accommodate the extra needs of large additions now being made to the local plants of the Chevrolet Motor Co. and Fisher Body Corp. Albert Kahn, Marquette building, Detroit, engineer in charge, closes bids Oct. 28.

MELLEN, WIS.—Pioneer Mining Co. has been incorporated with $200,000 capital to develop iron ore lands in the Menominee range, by James J. McGonigal, Frank J. McGonigal and Ray T. Finacune.

MILWAUKEE—The Koehring Corp., concrete mixers and paving outfits, has started work on a 1-story shop addition, 58 x 70 feet, at Thirty-first street and Concordia avenue.

MILWAUKEE—Grand Avenue Buick Co. has let the contract to the Coddington Engineering Corp., 290 Third street, for building a repair-shop addition, 60 x 80 feet, to its headquarters building at 3521 Grand avenue.

MILWAUKEE—A. O. Smith Corp. is building an addition 40 x 80 feet for testing cracking stills and other high pressure welded oilfield devices, as an adjunct to its recent addition for the manufacture of these products.

MILWAUKEE—Paul Riesen's Sons Co., 1018 Humboldt avenue, is the successful bidder for erecting the new branch sales and service building of the White Co., Cleveland, at Twenty-fifth and Clybourn streets, Milwaukee. It will be 175 x 200 ft., and cost about $125,000 fully equipped.

MILWAUKEE—Dornacker & Schaefer Mfg. Co., capital stock $25,000, has been incorporated to take over and develop the hardware manufacturing business of Dornacker and Schaefer 713½ Twelfth street. Incorporators are John P. and Mathias A. Dornacker and Matthew L. Schaefer.

WEST ALLIS, WIS.—LeRoi Co., gasoline engines and motors, is making several additions to its shops at Sixtieth avenue and Mitchell street.

WEST ALLIS, WIS.—Hinkley Co. has taken the general contract to build a $50,000 public garage and repairshop building, 80 x 110 feet, at Fifty-fourth and National avenues, for the Daggett-Yewdale Motor Co., 789 32nd street, Milwaukee.

## Business in Canada

VANCOUVER, B. C.—Empire Box Co., Smythe street, has started work on a factory here to cost $25,000.

VANCOUVER, B. C.—Tardif & Quenneville Construction Co. has general contract for addition to factory for Vancouver Trunk & Bag Co., 1424 Charles street. Building and equipment to cost about $30,000.

HALIFAX, N. S.—Nova Motors, Ltd., is having plans prepared for a garage and repair plant on Doyle street to cost $50,000. D. F. Saxon, Tramway building, is architect.

GALT, ONT.—McCaskey Systems, Ltd., will begin manufacture of fireproof safes, adding machine, etc., and propose to build a large addition to their plant next spring.

GREEN VALLEY, ONT.—D. Courville, Alexandria, Ont., proposes to start work in January on a sawmill here to cost $15,000.

GUELPH, ONT.—Mahoney & Austin, architects, Quebec street, are preparing plans for an addition to the plant of the Guelph Stove Co., York street, estimated to cost $140,000.

KITCHENER, ONT.—Dominion Truck Equipment Co., South street, has started work on a $15,000 addition to plant here.

TORONTO, ONT.—Link Belt, Ltd., 265 Wellington street West, has purchased a 3-acre site at Eastern avenue and Leslie street, and proposes to start work next spring on a plant 80x235 feet. The first unit will be for the manufacture of chain only, followed by other units including a foundry, machine shop, and later by a light structural steel shop. E. C. Burton is manager.

WINDSOR, ONT.—Auto Specialty Co., Tecumseh road, has awarded general contract to S. E. Dinsmore Co., Park building, for addition to plant here. Estimated cost $40,000.

LIMOILOU, QUE.—Construction work on the paper mill here for the Anglo-Canadian Pulp Co. is expected to be started at an early date. The mill will have a daily capacity of 480 tons of paper.

# New Trade Publications

PUMPS—Dunning Pump & Mfg. Co., Philadelphia, has issued a bulletin describing a 2-cylinder pump just added to its line.

BUCKETS—Features of its new drag line bucket are presented in a folder issued by the Hayward Co., New York.

GRINDING—Abrasive Co., Philadelphia, has issued a folder describing the uses for its new grinding wheels bonded with bakelite.

GYRATORY CRUSHERS—Kennedy-Van Saun Mfg. & Engineering Corp., New York, has issued a bulletin covering its ball-bearing, gearless crusher for ore or rock crushing.

STOKERS—A leaflet by the Flynn & Emrich Co., Baltimore, suggests that stokers must be efficient to bring expected savings in fuel costs and offers service to determine their condition.

MACHINE TOOLS—A catalog has been issued by Morey & Co. Inc., New York, covering its stock of used and new machine tools for a wide variety of purposes. Machines are illustrated and fully described.

TRAMRAILS—Another one of a series of pamphlets showing installations of its tramrail systems recently has been published by the Cleveland Crane & Engineering Co., Wickliffe, O.

WELDING ROD—Koro Electric Corp., Chicago, has issued a folder describing its welding rod, illustrated to show its methor of application. This rod is slightly corrugated, the effect being claimed to give a more even stream of molten metal in the flame of the torch.

CARGO PUMPS—Wilson-Snyder, Pittsburgh, has issued a bulletin featuring its line of cargo pumps for the rapid and efficient unloading of tank cargoes. Details of construction and data are given briefly, with a list of users.

TRAILERS—Clark Tructractor Co., Buchanan, Mich., has issued a catalog of its trailers for industrial haulage with tractors, showing various types for different uses and details of construction and operation. It is well illustrated.

ELECTRIC MOTORS—Ball and sleeve bearing motors manufactured by the Ohio Electric & Controller Co., Cleveland, are described and illustrated in a bulletin just issued by that company. Details of construction tending to efficient operation are illustrated.

CASTINGS—Taking as its problem the production of castings that cost less the C. O. Bartlett & Snow Co., Cleveland, has published a booklet of handsome appearance, analyzing the problem and solving it. The solution includes efficient handling of materials inside the plant. Application of this means of decreasing costs is then discussed from the viewpoint of the foundryman and a variety of installations are shown in picture, with explanatory text. Illustrations cover practically the entire molding process and indicate methods used in many large foundries.

AIR COMPRESSORS—Three bulletins on various types of air compressors have been issued by the Westinghouse Traction Brake Co., Pittsburgh. Each shows views of actual installations and gives detailed drawings and engineering data covering its types.

CRUCIBLE STORAGE—A leaflet describing an inexpensive storage oven for plumbago crucibles has been issued by the Plumbago Crucible association, New York. It gives much information as to methods for storing and care of crucibles, and description of the method of manufacturing them.

STEEL DOORS—Steel rolling shutters and doors are illustrated and described in a catalog by the Cornell Iron Works Inc., Long Island City, N. Y. Illustrations show fifty actual installations in various uses. Details of construction and operation of various types of doors and shutters are shown.

TRENCH BRACES—Braces made of steel for use in supporting sides of excavations and similar uses are shown in a bulletin by Templeton, Kenly & Co., Ltd., Chicago. The braces are shown in use and in construction detail. A line of jacks by the same makers are also illustrated.

CHAIN SLINGS—Stressing the importance of proper slings and hooks for use with chain hoists, Herbert Norris Inc., Buffalo, has issued a leaflet describing its adjustable slings for various uses, each adapted to the particular problem presented in lifting various classes of burden with safety and efficiency.

MOTORIZED POWER—General Electric Co., Schenectady, N. Y., has issued a bulletin showing applications of motor power to handling of materials, from electric locomotives of various sizes to cranes, tiering machines, leaders and unloaders. Halftones of actual installations are shown.

DRY STEAM—Standard specifications for clean and dry steam are given in a leaflet by Andrews-Bradshaw Co., Pittsburgh, with suggestions for attaining that condition in the steam used by power plants. Savings from the use of clean dry steam as compared with ordinary vapor are indicated.

CONVEYOR CHAIN—An attractive leaflet is being put out by the Farrell-Cheek Steel Foundry Co., Sandusky, O., calling attention to its conveyor chain of special steel to withstand unusual stresses, and designed to give free-running service. It also calls attention to a booklet issued by this company describing its special steel for various types of castings.

BENCH LATHES—A catalog by the Rivett Lathe & Grinder Corp., Boston, features its line of junior bench lathes, describing and illustrating their construction and operation. A chapter is devoted to methods of mounting and driving these lathes and the various attachments for use there on are presented. Complete engineering data also are given.

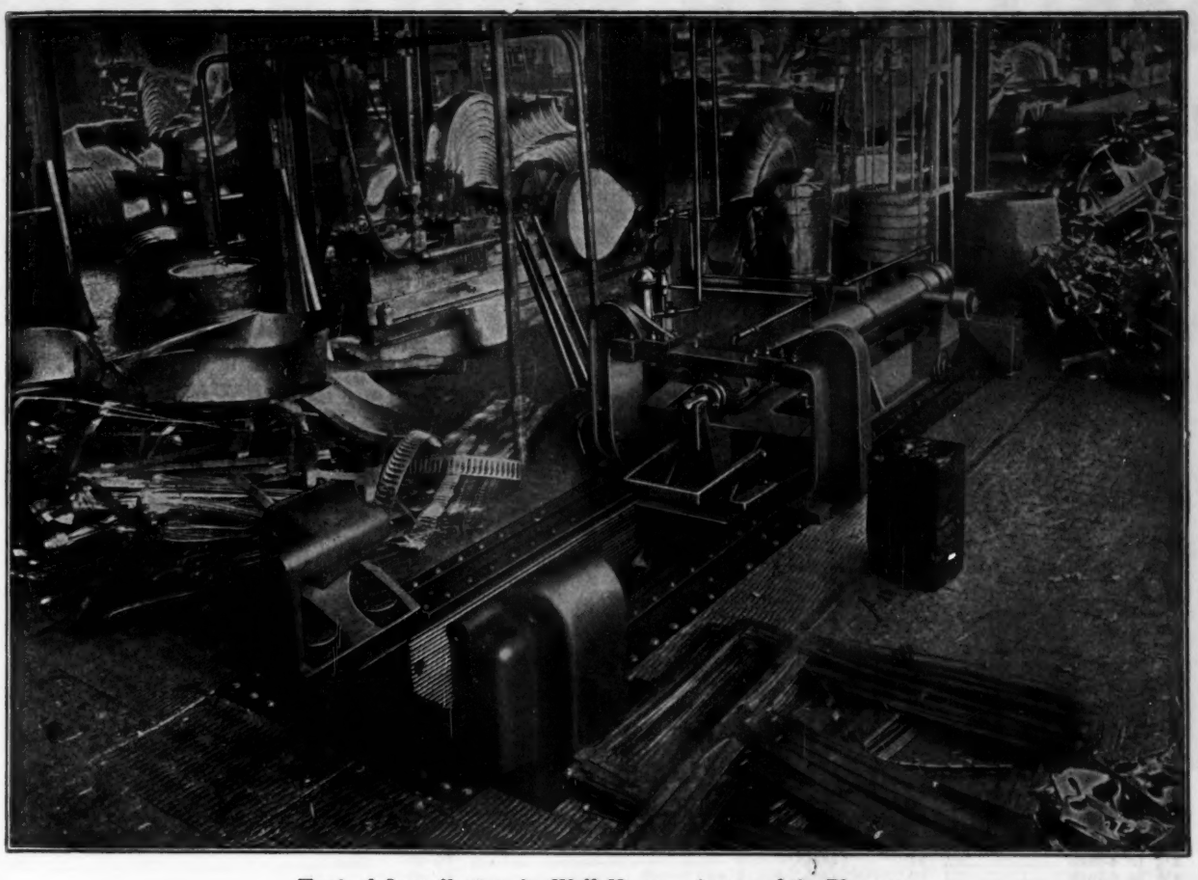
SPECIAL STEEL—A special steel which can be case hardened at low temperature without deformation is described in a bulletin by the Ludlum Steel Co., Watervliet, N. Y. It shows in illustrations a number of applications of this grade of steel in modern industrial production. Some discussion of the case hardening process is given.

ELEVATING MACHINERY—A bulletin by the Revolvator Co., Jersey City, N. J., describes its revolvable base machine for lifting, elevating and tiering. Every detail of its construction is pointed out and its uses indicated. Various types of platform are described and data on standard machines are given.

ALLOY STEEL—Southern Manganese Steel Co., St. Louis, has issued a number of bulletins covering castings from its alloy steel for high temperature and corrosive processes. These include a discussion of the mechanical properties of metals at high temperatures, a description of the alloy developed for these purposes and illustrations of various castings of this material for varied uses. A booklet on heat-resisting alloys also has been issued.

DREDGING MACHINERY—Sand and dredging pumps and hydraulic dredging machinery manufactured by the Morris Machine Works, Baldwinsville, N. Y., are illustrated and described in a bulletin by that company. It is profusely illustrated by halftones of pumps and dredges at work in various localities and for varied purposes. Descriptions and specifications of the pumps, with much engineering data, are given.

ROCK DRILL SHARPENER—A bulletin by the Sullivan Machinery Co., Chicago, describes its rock drill steel sharpeners for use on the job when shafts and tunnels are being drilled, to give quick service in sharpening tools. The catalog shows various improvements, including a new design of frame, more compact and lighter than its predecessors; a retracting hollow steel punch and new gaging devices for making double taper bits now used to increase drilling speed.



Typical Installation in Well-Known Automobile Plant

## WHY SHEET-SCRAP CAN BE PROFITABLY COMPRESSED

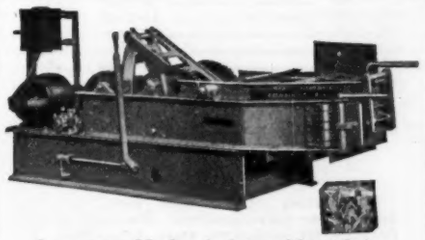
It commands at all times the best price;
It can be more conveniently stored;
It can be more economically handled;
It can be readily held for favorable markets;
It practically eliminates corrosion;
It permits of loading cars to capacity;
It saves much heat in remelting.

# LOGEMANN SCRAP-METAL PRESSES

**Hydraulic and Mechanical Types**

**LOGEMANN BROTHERS COMPANY**
**3126 Burleigh St. Milwaukee, Wis.**

*Also presses making crucible-size bricks of copper, brass, aluminum and other metals.*



Logemann Mechanical-type Metal Baler

*Please indicate character of scrap, quantity and heaviest gauge, when writing.*

# Discounts and Extras

## Steel Pipe

Pittsburgh and Lorain basing discounts, jobber's carloads.

Evanston, Ill., and Indiana Harbor, Ind., take differential 2 points less discount or $4 per ton higher net.

Chicago takes differential 2½ points less than Pittsburgh-Lorain basis or $5 per ton higher net.

**Butt Weld**

| | Black | Galvanized |
|---|---|---|
| ⅛-inch | 45 | 19½ |
| ¼ and ⅜-inch | 51 | 25½ |
| ½-inch | 56 | 42½ |
| ¾-inch | 60 | 48½ |
| 1 to 3-inch | 62 | 50½ |

**Lap Weld**

| | | |
|---|---|---|
| 2-inch | 55 | 43½ |
| 2½ to 6-inch | 59 | 47½ |
| 7 to 8-inch | 56 | 43½ |
| 9 and 10-inch | 54 | 41½ |
| 11 and 12-inch | 53 | 40½ |

**REAMED AND DRIFTED**

**Butt Weld**

| | | |
|---|---|---|
| 1 to 3-inch | 60 | 48½ |

**Lap Weld**

| | | |
|---|---|---|
| 2-inch | 53 | 41½ |
| 2½ to 6-inch | 57 | 45½ |

**EXTRA STRONG—PLAIN ENDS**

**Butt Weld**

| | | |
|---|---|---|
| ⅛-inch | 41 | 24½ |
| ¼ and ⅜-inch | 47 | 30½ |
| ½-inch | 53 | 42½ |
| ¾-inch | 58 | 47½ |
| 1 to 1½-inch | 60 | 49½ |
| 2 to 3-inch | 61 | 50½ |

**Lap Weld**

| | | |
|---|---|---|
| 2-inch | 53 | 42½ |
| 2½ to 4-inch | 57 | 46½ |
| 4½ to 6-inch | 56 | 45½ |
| 7 to 8-inch | 52 | 39½ |
| 9 and 10-inch | 45 | 32½ |
| 11 and 12-inch | 44 | 31½ |

**DOUBLE EXTRA STRONG**

**Butt Weld**

| | | |
|---|---|---|
| ½-inch | 42 | 32½ |
| ¾ to 1½-inch | 45 | 35½ |
| 2 to 2½-inch | 47 | 37½ |

**Lap Weld**

| | | |
|---|---|---|
| 2-inch | 41 | 32½ |
| 2½ to 4-inch | 43 | 34½ |
| 4½ to 6-inch | 42 | 33½ |
| 7 to 8-inch | 38 | 25½ |

(Note—Large jobbers obtain additional preferential discounts of 1 and 5 on black and 1½ and 5 on galvanized.)

## Wrought Iron Pipe

Pittsburgh basing discounts, jobbers' carloads. Individual quotations made on delivered basis.

**THREADS AND COUPLINGS**

**Butt Weld**

| | | |
|---|---|---|
| ¼ and ⅜-inch | +11 | +59 |
| ½-inch | 22 | 2 |
| ¾-inch | 28 | 11 |
| 1 to 1½-inch | 30 | 13 |

**Lap Weld**

| | | |
|---|---|---|
| 1¼ and 1½-inch | Upon application | |
| 2-inch | 23 | 7 |
| 2½ to 6-inch | 26 | 11 |
| 8 to 6-inch | 28 | 13 |
| 7 to 12-inch | 26 | 11 |

**PLUGGED AND REAMED**

Two points less than above

**EXTRA STRONG, PLAIN ENDS**

| | | |
|---|---|---|
| ¼ and ⅜-inch | +19 | +54 |
| ½-inch | 21 | 7 |
| ¾-inch | 28 | 12 |
| 1 to 1½-inch | 30 | 14 |

**Lap Weld**

| | | |
|---|---|---|
| 2-inch | 23 | 9 |
| 2½ to 4-inch | 29 | 15 |
| 4½ to 6-inch | 28 | 14 |
| 7 to 8-inch | 21 | 7 |
| 9 to 12-inch | 16 | 2 |

**DOUBLE EXTRA STRONG**

**Butt Weld**

| | | |
|---|---|---|
| ½-inch | +47½ | +59½ |
| ¾-inch | +28 | +40 |
| 1-inch | +34 | +46 |
| 1¼-inch | +28 | +40 |
| 1½-inch | +27 | +39 |

**Lap Weld**

| | | |
|---|---|---|
| 2 and 2½ inches | +13 | +25 |
| 3 to 4-inch | + 8 | +17 |
| 4½ to 6-inch | + 9 | +18 |
| 8-inch | +12 | |

(Note—Large jobbers obtain additional preferential discounts of 1, 5 and 2½ on black and galvanized.)

## Boiler Tubes

Pittsburgh less carload discounts. Carload 4 points larger

**STEEL (Lap Welded)**

| | |
|---|---|
| 2 and 2¼-inch | 23 off |
| 2½ and 2¾-inch | 33 off |
| 3-inch | 36 off |
| 4¼ to 3¾-inch | 38½ off |
| 4 to 13-inch | 42 off |

(Note—Additional discounts of 5 to 7 extra 5 per cents now being given.)

**CHARCOAL IRON**

| | |
|---|---|
| 1½-inch | +22 |
| 1¾-inch | +12 |
| 2 and 2¼-inch | + 2 |
| 2½ to 3-inch | 3 |
| 3¾ to 4½-inch | 5 |

(Note—Additional discounts of 2 or 3 extra 5 per cents now being given.)

**SEAMLESS COLD DRAWN**

| | |
|---|---|
| 1-inch | 56 off |
| 1¼ and 1½-inch | 48 off |
| 1¾-inch | 32 off |
| 2 and 2¼-inch | 27 off |
| 2½ and 2¾-inch | 35 off |
| 3-inch | 41 off |
| 3¼ and 3½-inch | 43 off |
| 4-inch | 46 off |
| 4½, 5 and 6-inch | 41 off |

**SEAMLESS HOT ROLLED**

| | |
|---|---|
| 2 and 2½-inch | 30 off |
| 2½ and 2¾-inch | 38 off |
| 3-inch | 44 off |
| 3¼ and 3½-inch | 46 off |
| 4-inch | 49 off |
| 4½, 5 and 6-inch | 44 off |

(Note—Additional discounts of 2 or 3 extra 5 per cents now being given.)

**SEAMLESS STEEL MERCHANT BOILER TUBES**

Extras:

Add $8 per ton for more than four gages heavier than standard and add 10 per cent to theoretical weight.

Add 5 per cent for lengths over 24 feet and not over 26 feet.

Smaller tubes than 1-inch and lighter than standard gage to be sold at mechanical tubing list and discount.

Intermediate sizes and gages not listed above take price of next larger outside diameter and heavier gage.

**SEAMLESS STEEL MECHANICAL TUBING**

**Base Discounts on New List July 1, 1925**

Carbon 0.10 to 0.20 per cent.....50 to 55 off
Carbon 0.30 to 0.40 per cent.....45 to 50 off

**SEAMLESS STEEL LOCOMOTIVE AND SUPERHEATER TUBES**

Net prices per foot f.o.b. Pittsburgh

| Outside diameter | Gage | Price |
|---|---|---|
| 2-inch | 12-gage | 14¼c |
| 2-inch | 11-gage | 15c |
| 2-inch | 10-gage | 16c |
| 2¼-inch | 12-gage | 16c |
| 2¼-inch | 11-gage | 17c |
| 2¼-inch | 10-gage | 18c |
| 3-inch | 7-gage | 33c |
| 5⅝-inch | 9-gage | 50c |
| 5½-inch | 9-gage | 52c |

Plus usual extras for forming and for long lengths over 18 feet and for commercially exact lengths.

## Plate Extras

**BASE**

Rectangular plates, tank steel or conforming to manufacturers' Standard Specifications for structural steel, dated Nov. 24, 1922, or equivalent, ¼-inch thick and over on thinnest edge, (except for ¼-inch or 72 inches wide when ordered to weight in pounds per square foot—see width and gage extras), 100 inches wide and under, down to but not including 6 inches wide, 5 feet 0 inches long up to published limit in length but not over 80 feet 0 inch, are base. Extras per pound for width or diameter.

**All Plates, Rectangular or Otherwise**

¼-inch thick and heavier, but not less than 11 pounds per square foot, if ordered to weigh—

| | |
|---|---|
| Over 100 inches to and including 110 inches | .05c |
| Over 110 inches to and including 115 inches | .10c |
| Over 115 inches to and including 120 inches | .15c |
| Over 120 inches to and including 125 inches | .25c |
| Over 125 inches to and including 128 inches | .50c |

Plates less than ¼-inch or lighter than 11 pounds per square foot.

| | |
|---|---|
| Over 72 inches to and including 84 inches | .10c |
| Over 84 inches to and including 96 inches | .20c |
| Over 96 inches to and including 100 inches | .30c |

Over 100 inches add .35c to width extras for plates ¼-inch thick and heavier.

**GAGE**

**Plates not Exceeding 72 inches Wide**

Plates less than ¼-inch gage, to and including ⅜-inch; or lighter than 10.2 pounds per square foot to and including 7.65 pounds per square foot..... .20c

**Plates over 72 Inches Wide**

Plates less than ¼-inch gage, to and including ⅜-inch; or lighter than 11 pounds per square foot, to but not including 7.65 pounds per square foot ..... .20c

Plates ordered 7.65 pounds per square foot ..... .30c

**QUALITIES**

| | |
|---|---|
| Pressing steel | .10c |
| Flange steel (boiler grade) | .15c |
| Ordinary firebox steel | 20c |
| Stillbottom steel | .30c |
| Locomotive firebox steel | .50c |
| Marine steel | 1.50c |
| Hull material subject to U. S. Navy Dept. Specifications for Medium or Soft Steel | .10c |
| High tensile hull steel subject to U. S. Navy Dept. or equivalent specifications | 1.00c |
| Boiler steel subject to U. S. Navy Dept. Specifications, classes A and B | 1.50c |
| Hull plates to hull specifications, required to stand cold flanging, take extra for flange steel. | |

**Floor Plates**

Checkered plates ..... 1.75c

Checkered plates are not furnished to sketch and are rolled from "Stock Steel" only. No physical tests will be made on checkered plates.

**INSPECTION**

Mill inspection .....No extra

Charges for other inspection, such as Lloyd's or American bureau of shipping, will be made by inspection bureau direct to buyer.

**CUTTING**

**LENGTH OR DIAMETER**

**All Plates, Rectangular or Otherwise**

Five feet and over up to published limit of length, but not over 80 feet.....No extras

| | |
|---|---|
| Under 5 feet to 3 feet inclusive | .10c |
| Under 3 feet to 2 feet inclusive | .25c |
| Under 2 feet to 1 foot inclusive | .50c |
| Under 1 foot | 1.55c |
| Over 80 feet to 100 feet inclusive | .10c |

Over 100 feet add .25c plus .05c for every additional 2 feet or fraction thereof.

**Regular Sketches**

With not more than four straight cuts. (Including straight taper plates)

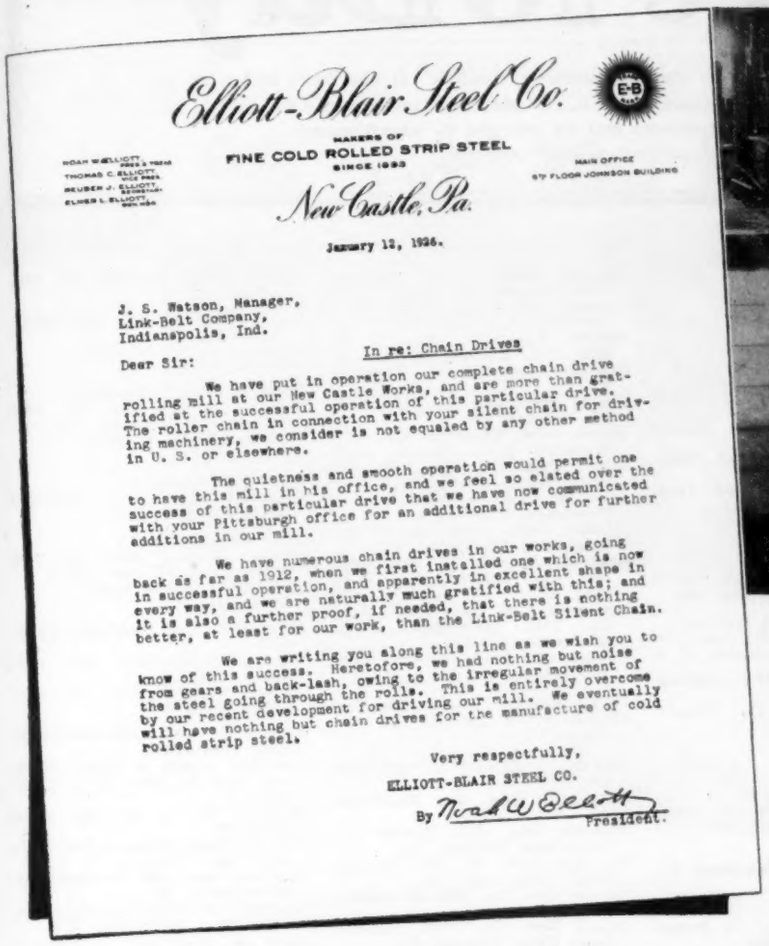
Additional extra ..... .10c

**Irregular Sketches**

With not more than four straight cuts. (Sketches cannot be sheared wiht re-entrant angles)

Additional extra ..... .20c

# Why Elliott-Blair Uses Link-Belt Silent Chain Drives



Elliott-Blair Steel Co.

MAKERS OF
FINE COLD ROLLED STRIP STEEL
SINCE 1893

NOAH W. ELLIOTT, PRES. & TREAS.
THOMAS C. ELLIOTT, VICE PRES.
REUBEN J. ELLIOTT, SECRETARY.
ELMER L. ELLIOTT, MGR. MFG.

MAIN OFFICE
6TH FLOOR JOHNSON BUILDING

New Castle, Pa.

January 12, 1926.

J. S. Watson, Manager,
Link-Belt Company,
Indianapolis, Ind.

In re: Chain Drives

Dear Sir:

We have put in operation our complete chain drive rolling mill at our New Castle Works, and are more than gratified at the successful operation of this particular drive. The roller chain in connection with your silent chain for driving machinery, we consider is not equaled by any other method in U. S. or elsewhere.

The quietness and smooth operation would permit one to have this mill in his office, and we feel so elated over the success of this particular drive that we have now communicated with your Pittsburgh office for an additional drive for further additions in our mill.

We have numerous chain drives in our works, going back as far as 1912, when we first installed one which is now in successful operation, and apparently in excellent shape in every way, and we are naturally much gratified with this; and it is also a further proof, if needed, that there is nothing better, at least for our work, than the Link-Belt Silent Chain.

We are writing you along this line as we wish you to know of this success. Heretofore, we had nothing but noise from gears and back-lash, owing to the irregular movement of the steel going through the rolls. This is entirely overcome by our recent development for driving our mill. We eventually will have nothing but chain drives for the manufacture of cold rolled strip steel.

Very respectfully,

ELLIOTT-BLAIR STEEL CO.

By Noah W Elliott
President.

"The quietness and smooth operation would permit one to have this mill in his office.

"Heretofore, we had nothing but noise from gears and back-lash, owing to irregular movement of the steel going through the rolls.

"We have numerous chain drives in our works, going back as far as 1912, in successful operation.

"There is nothing better, at least for our work, than the Link-Belt Silent Chain. We eventually will have nothing but chain drives for the manufacture of cold rolled strip steel."

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